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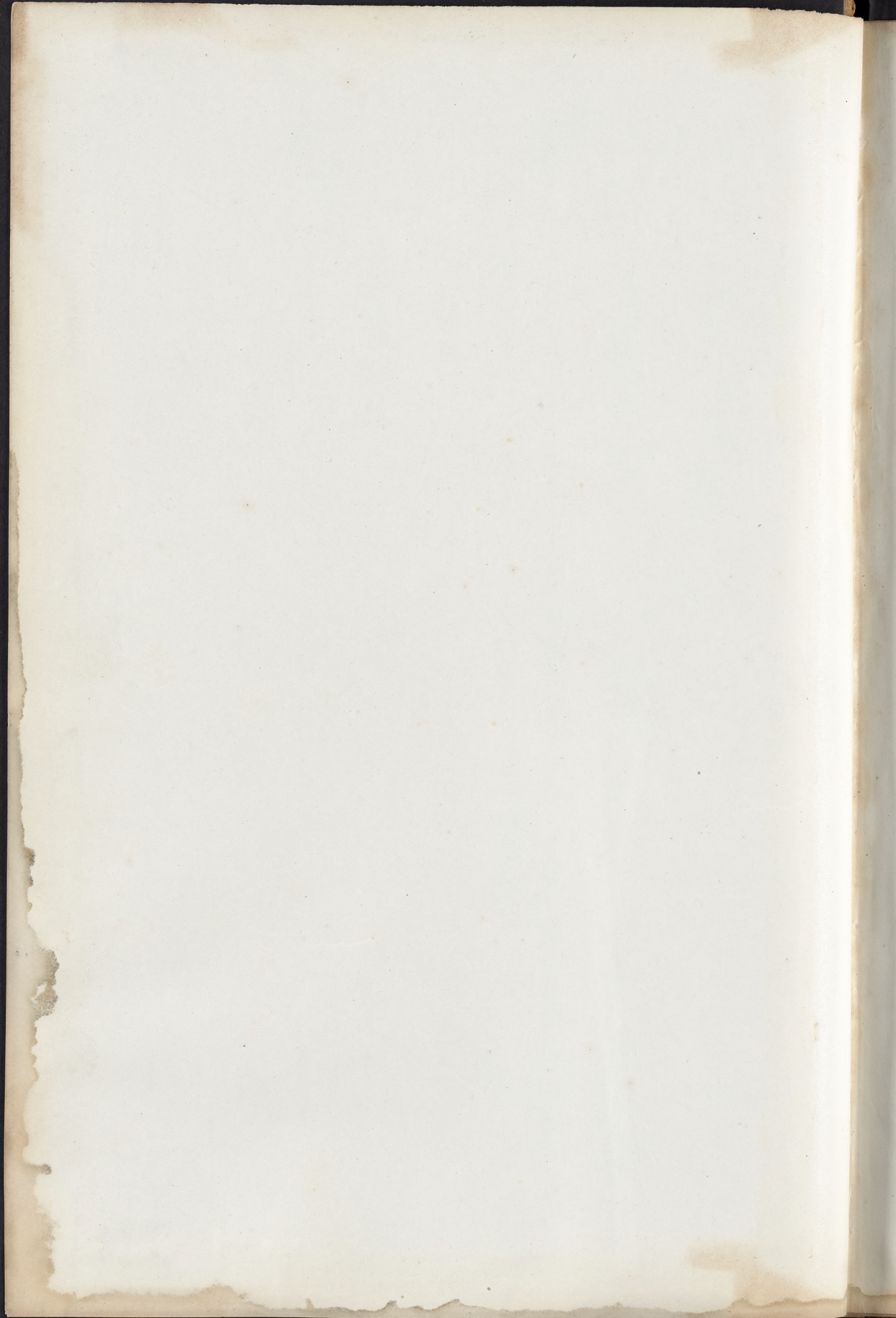
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VOLUME

34

IN THE SUPERIOR COURT,

State of California, County of Sacramento.

OCTOBER SESSION, 1881.

HON. JACKSON TEMPLE, - - - - - PRESIDING JUDGE.

WINFIELD J. DAVIS, OFFICIAL REPORTER.

SAMUEL OSBOURNE AND WILLIAM M. CUTTER, REPORTERS.

The People of the State of California,
vs.
The Gold Run Ditch and Mining Co. }

COUNSEL:

For Plaintiff,

HON. A. L. HART, Attorney General, GEORGE CADWALADER, ISAAC S.
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For Defendant,

J. K. BYRNE, W. C. BELCHER, S. M. WILSON, W. T. WALLACE, A. B.
DIBBLE, A. P. CATLIN.

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 in and for the County of
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Winfield J. Davis
 Official Reporter

In the Superior Court
of the State of California
in and for the County
of Sacramento

| | | |
|--|---|------------------------------|
| The People of the State of California | } | Monday |
| vs | | Tuesday 9 th 1882 |
| The Gold Run Ditch and Mining Company | } | Afternoon |
| | | Session |

Testimony.

A. A. Howard

<Resumed>

Mr Dibble Q What has been
that comparative amount
of natural wash for the
last five years?

A Very much greater Sir.

Q Will you explain the
reason why the natural
wash has been and now
is so much greater than

the mineral wash.

a The great extent of territory shedding into the streams from the Summit down, and the heavy rains and snow which falls and carries it away, as it goes down as compared with the small amount of mineral land washed.

③ In speaking of the small amount of mineral land washed compare the amount of it with the immense amount of natural wash area.

a I do not know of any way that I could make a correct estimate but our mineral wash is all below what is known as Sportsman's Staller nearly all and for 50 miles above that we have the natural wash in great quantities. I do not know the extent of the mining territory.

that borders on the South
fork of the American.
It reaches from the
County line up to about
Sportsman's Stall 12
miles above Placerville.
The rest of the immense
snow sheds have no
mining on them. They
are mostly of light alluvial
soil which washes very
readily. It cuts out
in great gulches and
the surface is continually
running into the river.

Q Could you estimate
by miles or acres the
amount that is covered
by mining — that is now
covered by mining claims
and the amount that is
not covered by mining
claims, that is washed
into the river from natural
causes? A Washed
into the American?

9535 A Yes the South Fork
of the American river.

I mean one acre in ten or one acre in fifty or one acre in a thousand that is what I am getting at? All well for a rough estimate I would not suppose there is more than one acre in a hundred.

Q Then do I understand you that the natural wash covers 100 acres to one acre of mining wash?

A Yes I think into the American River

Q Into the South Fork of the American river so your calculation of 40 times greater - the natural wash - based on an estimate as to the difference? A Yes.

Q Including the heavy water fall that takes place in the mountains? Are you acquainted with the mining ditches and reservoirs in El Dorado County?

A I am yes

Q If the waters of these mining ditches and reservoirs was applied to agriculture and cultivation what would be the effect of the waters in amount compared with the effect of the use of the waters in amount for mining purposes

Mr. Hart I object to the question on the ground that it is irrelevant and immaterial. Of course if the ^{effect of the} application of water for agricultural purposes would be to send these mountains down here they would be subject of course to injunction.

Mr. Dibble I want to show as far as the navigability of the river is concerned it would be a great loss. It has been stated that the water used for

mining could be used
for agriculture

The Court I do not see
that the fact that it
might be used some
other way more injurious
would be a matter of
any interest in this case

Mr Dibble They claim in
their Complaint that we
use the water in a certain
way and that the river
is becoming less navigable
and they have claimed
that it should be used
for agriculture. The object
of this testimony is to rebut
exactly what they have
stated in this matter
and what they tried to
prove by their witnesses

The Court I do not think
that would be exactly
pertinent to this case.
I will give you the benefit
of an exception

Mr Dibble Enter our exception

Q State whether the

Ex

7538

natural washing is increasing or diminishing in El Dorado County?

A. It is increasing.

Q. To what extent is the natural wash increasing in El Dorado County?

A. To the extent to the increase in cultivation the denuding of timber streets.

Q. Have valuable lands been made in El Dorado County and if so, how?

A. Some very valuable lands have been made by walling and damming and catching the sediment of the streams.

Q. What sediment?

A. Sediment flowing in the streams, mining and natural wash or anything else I suppose that flows in there.

Q. Have you heard the expression "sickensland" in this case?

A. Yes.

Q. State whether "sickensland" has been made in El Dorado County and if so the source and the amount in acreage?

Q. I do not that I could state the amount in acres. There are a great many acres though.
 Q. To what amount?

A. I should think from 500 to a 1000 acres that I could call to mind if I had time.

Q. State examples where land has been made or instances where land has been made in that way?

A. Assemblyman Frazer made about 15 acres last Winter and the Winter before, and a man named Bayler has made a number of pieces that he calls potato land on his ranch.

He lives about two miles this side of Placerville and a gentleman named Lewis above Placerville has made considerable land. Lyon below the Lyon Mine has made a good deal of land.

And a gentleman below Smith's Plant, Graton, and various other parties through the country. Same at White Oak

They have been making land.

2- Average the depth of the slickens and tailings that make this character of land?

A. From one foot to 15 feet.

2- Compared with the natural lands, what has been the production of this made land?

A. The production?

{ The Reporter read the question }

A- The production of made land is much greater than that of natural land. They usually plant potatoes, clover and other vegetables on those made lands, which do not do well on the hillsides.

2- In El Dorado County to what extent do the farmers desire slickens?

Mr. Hunt I object to that question, it is irrelevant and immaterial. We do not desire it down here.

Mr. Dibble You do not know what is good. I

think the question is proper.

The Court I think not as to the desire. He has shown that it is advantageous. If it is advantageous they would desire it.

Mr. Dibble To what extent do the farmers regard it advantageous?

Mr. Hart To that I make the same objection.

The Court That is the same question.

Mr. Dibble I want to prove that the farmers desired to use it but they go and carry it onto their lands and that they make lands to make their homes of it. It is to offset the testimony that they have introduced here that slickens are injurious. We want to prove that it is not an injury.

The Court You have proved here that it is advantageous.

Mr. Dibble What is the effect of slickens water with reference to the irrigation

of the land?

A Farmers seek for muddy water to irrigate flower and gardens.

Q- What farmers?

Mr. Hart I object to that question it is irrelevant and immaterial.

The Court That is the same question that was asked a moment ago.

Q- Do they use it?

A- They do.

Q- What is the effect of it in the use? A- It is considered that it is a fertilizer.

Crop Examination
A. A. Howard.

Mr. Hart Why is it that the farmers use slickens water ^{for} up where you live?

A- I said they considered it a fertilizer. They so tell me.

Q- Will the water when put on the land there wash it off faster than it leaves it or does it not more than it leaves on?

A- Not in irrigating they keep it. The man that is irrigating keeps it from washing off as much as possible.

Q- So when they irrigate up there they do not effect the surface of the soil. It deposits upon the soil all the slickens that are contained in the water?

A- It washes but no farmer allows it to wash more than he can help it.

Q- It leaves more on than it takes off? A- Yes. I think so in the clover fields.

Q- What do you mean by slickens water?

A- Slickens water?

Q- Yes? A- Muddy water.

Q- You call all muddy water slickens water?

A- I think so.

Q- You do not make any distinction as to the different kinds of material that are carried in the water when you speak of slickens?

A- The water that we have in our irrigating ditches up there is principally the slickens of the surface because they are lighter than the mining debris upon the dumps.

Q- So that the soil deposited there is the same as the soil upon which it is deposited the only difference being in the depth of it?

A- The soil is the finest particles of the soil above. The heavier portions have been left behind.

Q- They never irrigate with slickens from the mines do they?

A- No they irrigate with slickens from the mines where they are located below the mine.

2- When they are located below? A- Yes.

2- Then the slickens is of a different character from that which is on the surface?

A- Yes.

2- Which is the better soil? that which comes from the surface or that which comes from the bottom of one of these hydraulic mines?

A- It would depend. I should call the surface the best; but on some ground sand is good. On a loess ground they consider that sand is better to mix with it, but on the most of our soil we do not desire any more sand than we can avoid.

2- What you mean is that there are some lands improved by sand? A- Yes.

2- But the generality of your soil is not improved by sand? A- I think not.

2- On the contrary it is injured by it?

A- It might be injurious to some land and not to others.

Q- The general surface of the land there would be injured by sand in any considerable quantity?

A- I think sand would be injurious to a good piece of land. But where you make land there all bedrock sand is good.

Q- And your testimony there is sand improves bedrock for the purposes of cultivation?

A- Yes, it improves adobe too.

Q- There is but very little adobe land there?

A- Not a great amount.

Q- Is there adobe land in the mountains?

A- Some places, yes.

Q- Where will you find any adobe land in El Florado County?

A- The land on the Green

Spring Ranch on the Calouma road.

Q- How much is there, there?

A- The valley is a couple of miles long and a half a mile ^{wide} perhaps.

Q- Is it all adobe?

A- Yes, it is. I think the bottom of it is adobe.

Q- The bottom of it?

A- Yes a good deal in the center is adobe.

Q- What do you mean by the bottom of the land?

A- Adobe and boulders.

Q- You cover adobe and boulders up with sand then if you want to improve it is that a fact.

A- I said that sand is beneficial to this kind of land.

Q- How deep would you desire sand on that kind of land to make it good tillable land?

A- I think four inches would be beneficial

to it.

Q. How would ten feet do?

A. I do not think ten feet would improve the adobe any but I would have the ten feet there to make the adobe.

Q. Because the adobe consists of sand that is no account?

A. The adobe consists of sand that is so hard that when it bakes when you turn it up it breaks up in chunks.

Q. It is no account without sand?

A. Yes, it is no account

2. How many bushels of grain to the acre will it raise without some kind of sand in it?

A I have never seen that kind of land cultivated. It is used for pasturage.

2. It is not considered worth cultivating is it in its natural condition? A Yes.

2. Is it not a fact that a great proportion of the made land you have there is made on bed-rock or on land that approaches very nearly to the bed rock?

A A good deal of it has been made on bed-rock. Some of it has been made on other land. This one place I speak of Baylors, he made it in ravines, in his field where it was not bed-rock.

2. How deep is it from the bed rock to the top of the soil? A I do not know the exact depth. It was 9550 land that he raised grain

on, flow land, and he has filled up one place 22 feet deep at least

Q. What did he fill it up for? a To make a potato patch

Q. Why did he fill it up?

a He says it produces potatoes when his other land comes not. He produced about 12 tons of potatoes on this piece, this year

Q. Was it subject to inundation or overflow before?

a No sir,

Q. Why would it not raise potatoes? a I expect the main reason would be that he would not irrigate it very well in the summer, on the side hills and the wash would be too great there

Q. It would not hold any moisture there, would it?

a It would not hold moisture so well. It was on a side hill. By grading this flat piece of ground the

Emel irrigate it and hold the moisture

2. By filling it up, he flattens it and makes a level surface? A Dike has made a greater extent of surface ground

2 In filling it up, he has made more surface? A Yes

2 And by this means he is enabled to hold the moisture in it, is that a fact? A Yes.

2 In speaking of shelter land you refer to land made generally out of the washing of the top soil?

A There is a great deal of land made up there. The piece I spoke of, of Assemblyman Frazer - that he has made, that was made by taking the waters of Hantown Creek and turning them behind a wall. He has walled out the creek and turned the water inside of the wall and filled up 15 acres of

think. That is taking all the washings of the Creek.

Q How long did it take him to fill it up, by putting the waters in there?

A He has been two years at it.

Q It took him two years to fill it up how deep?

A How deep has he filled it up?

A About 2 or 6 feet I think.

Q Where did he get his water?

A It is the natural water of Stanton Creek immediately below the Flume, a little below the Flume to Placerville and to Spanish Hill. The flume carries the tailings that are washed at Spanish Hill through Placerville, and a little below the mouth of the flume, he takes up the water.

Q What flume is that?

A The flume known as the Bedrock Flume. It goes down through Placerville.

9553 Q Where does it come from?

Q. It comes from Cedar Ravine and other points above there, and it carries the tailings through the town that are washed up there so as not to let them lodge in the town.

Q. What mine tail into that flume? A. Spanish Hill and Smith's Flat.

Q. What kind of mines are they? A. They formerly

were hydraulic mines. Spanish Hill was, but the others are not running now. They have been ground sluicing out the tailings just above that point and running them through this flume and dumping them in.

Q. How long since they run that hydraulic mine there.

A. They have not run since 1872 I do not think.

Q. How many mines are running in Eldorado County hydraulic mines.

9554 A. I do not know of any.

Running now

O How long since you have known of any running there
A It is two or three years since I have seen any hydraulic mine running. I think there has not been many running since 1873 or 74

O How many, how many have been running at any time since 1873 or 4 at any one time

A I think from 1865 to 1870 in the region of Placerville there were 10 or 12 hydraulic mines.

O How many since 1873 and 1874?

A I said I had not seen any running. I saw the Sitch Companies Hydraulics running a year or two ago I do not know how long they run

O Is it not a fact that comparatively little if any hydraulic mining in Colorado

County since 1873-4?

A That is the case, yes.

Q Not more than one mine running there since that time?

A Perhaps more than one hydraulic mine, There has been very little since 1875 compared with ten years before.

Q There has been scarcely any of it done?

A There is not much mining done in that region now.

Q Is there one hydraulic mine that you know of that has run a year since 1873 and 1874?

A Continuously?

Q Yes.

A I do not know of any.

Q Or run three months.

A I think perhaps Mason has run more than three months.

Q You think perhaps Mason's mine run more than three months since the year 1873?

and 1874

A yes

Q What other one has run since that time at all

A The Sitch Company were running for a time a Texas Hill.

Q How much time did they run?

A I do not know. I saw them run once when I passed there. I do not know how long they run. They afterwards stopped and put up a mile there.

Q They did not run over a month?

A I think so. I should think so from the place I saw excavated

Q How large a place did you see excavated from these ~~diggings~~ workings

A I could not tell how large but I think larger than they could make in a month.

Q Two months do you think they continued?

A I do not know how long they run there. There was some men running above Smiths Flat one time I do not know how long they were running.

Q How long ago was that?

A That was two years ago.

Q You do not know how long they run?

A No sir.

Q They could not have run more than a month or so?

A I do not know how long they run. A man was killed in the mine and I was on the Coroners inquest over him he was killed in a hydraulic mine.

Q Did you notice any considerable amount of work that had been done there at that time?

A I did not see the mine at that time. The man was brought away from the mine.

I saw him and the evidence was that he was killed in a hydraulic mine.

Q That is all you know about there having been any mining there, That is all you know. it is a matter of general knowledge in the County that there has been very little hydraulic mining done there for ten years?

A That is to my knowledge.

Q Has there been any mining - any hydraulic mining done there

A There is considerable drift mining done there now

Q Where is it done?

A The Excelsior mine, the Crown Hill mine is being drifted now. I do not know how many men are at work I do not live far from there and I can hear them blasting all the time

Q There are a couple of men working in that mine there

A I see them go to work
sometimes I think 12 or 18
men are at work in that
place.

Q What other place. Before
answering that question I
will ask you how long have
they been working at that
place

A I think they have been
working ever since hydraulic
stopped.

Q At drift mining?

A Yes.

Q What other place have
they been at work?

A They are working at drift
mining in the Lyon mine
a large force of men I do
not know exactly the number

Q How long have they been
working there?

A For a number of years

Q Where is the Lyon mine
located?

A It is located two miles
above Placerville

Q On what Creek?

A Well it is in the outlet
of a flat that comes down
to Hangtown Creek.

Q Hangtown Creek?

A Yes.

Q What kind of a creek
is that?

A A small stream.

Q So you know what is the
grade of it?

A I do not.

Q Is it ten feet to the mile

A I think so yes

Q About that?

A Yes.

Q What other mine besides
that?

A The Benfeldt

Q Where is that located

A At Smiths Flat

Q How long has that been
worked

A That has been worked a
number of years I do not
know how long. They have
either worked continuously or
kept the water pumped. I
have never passed there but

where the water wheel was
running for some purpose
Q You say that is at Smith's
Fear?

A Yes.

Q Where does that tail
into

A That tails into Hangtown
Creek also

Q How far from the other

A Half a mile

Q Where are they with ref-
erence to the American River
those two creeks - those two
mines.

A About three or four miles
south of the River

Q Where does Hangtown
Creek run to

A It runs into Weber Creek

Q Where does Weber Creek
run to?

A To the American River

Q How far from these mines
is it to Weber Creek

A From Weber Creek about
three or four miles

Q Four miles from Weber Creek

And from the Junction of
Huntown Creek to the point
where Weber Creek puts into
the South Fork of the American
how far is that

A Fifteen miles - 10 or 15 miles

Q About what is the grade
of Weber Creek?

A Well some places very
little. Other places perhaps
ten feet to the mile I do
not know the grade.

Q It is ten feet to the mile
where it is the steepest?

A Yes

Q Where it is very little how
much is it?

A I have no way of estimating
that more accurately than by
the mining that is being done
there now by a company of
Chinamen and they cannot
wash it until they raise these
sluice 6 or 8 feet at the back
end to carry the water up
and they have to carry it
up with a hose and pipe.
They are washing it by

Raising the back ends of these
 sluice 6 or 8 feet and then
 they shovel the dirt into
 them and in that way
 they have the dirt car-
 ried away.

Q Thor will not carry
 sand away ?

A Thor will take any
 light material as soon
 as it is dissolved in
 the water.

Q That dont carry sand away will it? A No sir

Q Nor even any kind of light material hardly unless it is fully dissolved in the water - well, what other drift mining is there, there?

A They have formerly been drifting, on the other side from Texas I tell and they are now I suppose, they built a mill there but I do not know how many men are working in Texas I tell now.

Q Do you know how much they have been doing there - you do not know how many men? A I do not know how many Companies.

Q How long have they been at work there, do you know?

A They have been at work there the present Company has 2 or 3 years I think and before that it was worked by another Company.

Q How far is that from

the banks of the South Fork
of the American River?

A About 4 miles.

Q What is it located on?

A It is located on the hill
between Haytown Creek and
Weber Creek.

Q Where does it dump its tail
ings?

A Weber Creek.

Q Are there any important
drift mines on the banks of
the South Fork of the Amer-
ican River at work or that
have been at work in ten
years?

A I do not
know how many are at work
on the bank of the river.

I know of one company, not
a very large company. I have
a friend that has been tun-
neling there. I think there
were three of them engaged -
I do not know whether they
hired any men or not. It
was the only one that I
have any personal knowl-
edge of. I have not been
over to examine it but

I know I have an acquaintance that has been mining there by drifting.

Q Now about your quartz mine there. Are there any quartz mines located on the banks of the American River so as to tail directly into the South Fork of the American River?

A I think there are two.

Q How many stamps?

A On the north side of the river, and the Kimball Company at Gold Hill dumps at the river.

Q Has that been working during the last ten years?

A It has been working all the time now.

Q How? A I think it is working all the time now.

Q How long has he been working? A I do not think over a couple of years since it was built.

Q Well? A That dumps

into the stream that runs down by Coloma and into the river, about two miles to the river from the mill

Q What kind of a stream is that? A It is a small creek

Q How much is its grade?

A The grade is very heavy

Q How many stamps are worked in that quartz mine?

A Ten

Q Two tons to the stamp?

A That is what I have been told. I certainly do not know

Q Where is the other one?

A There are two that I think dump into the American River, I can see them. I have never been through them, but I can see them on the river on the north side toward Kelsey

Q How long have they been at work? A They have not been at work but a little while

Q About how long?

A Only a few months I think since they first got started up.

Q. Do you know how many stamps they use?

A I do not. I have heard that there were ten stamps.

Q. Do you know of any other quartz mines on the South Fork of the American River?

A That dump immediately into the River?

Q. Yes Sir, that dump into the River? A I do not know of any dumping into the river I think, except those three, only going through the channel of Weber Creek and Haytown Creek. There is a number that dumps in Haytown Creek and Weber Creek up with us.

Q. About how far up from the junction of the forks of the American River?

A About 20 miles.

Q. How many seam mines do you know of on the bank?

of the American River, the
Shelly Fork?

A I do not remember of
but one now that has been
graded as a seam mine.

Q Where is that?

A Uniontown

Q How far is that from
Placerville? A About 10 miles

Q Above? A Below, a little
below Coloma

Q What is seam mining. I
am for information?

A. As I understand seam
mining it is a small stratum
of quartz or what they call
porphyry containing gold some
of them are not thicker than
my two hands, and all the
gold that is contained in the
mine or that is looked for
was to follow that seam, and
you take it out, and some
of it contains very rich de-
posits of gold

Q How do they get them
out, by means of tunnelling?

A By tunnelling and digging

Shafts.

2. The amount of material removed is very inconsiderable?

A. Oh, I do not know of any — you speak of the American River; most of the mines that I am acquainted with are in the vicinity of Clarksville, a little above the line of Sacramento County. They do not use anything but a pan and a mortar those that I am acquainted with in these Lead mines.

2 Well, they remove how much — how much would a man remove from a Lead mine like that in a day?

A. I do not think he would remove but very little, they are principally excavating.

2 Would they remove a cubic foot of material?

A. Oh yes, they have to remove more or less earth to get to their excavations, perhaps 1 or 2 cubic yards

a day they will remove
 2. Until they get to their
 crevice? After sin
 2. And after that?

A Oh, I think when they
 have got their shaft or tunnel
 into where they want to
 crevice they remove but very
 little dirt

2 A cubic foot a day, or
 how much? A. Taking
 out the quartz and pounding
 it with a hand mortar, cer-
 tainly they would not remove
 much when they were doing
 that, but in sinking their
 shaft to get to it, they
 would remove about the same
 amount that any other
 mine would.

2 Your testimony in relation
 to the removal of the ma-
 terial from the wash was
 in relation to Eldorado
 County within the last 5
 years if, I understand you?
 A Yes sir

2 Your companion of the

amount between the amount
of natural wash and the
amount of wash from the
mines. A. Yes sir.

Q But you were confirming your
testimony to the South Fork
of the American River, I
understand were you not?

A Yes sir, I was.

Q And in Eldorado County?

A Yes sir.

Q Speaking of the number
of acres of the natural drain-
age in Eldorado County, you
said there was 100 acres
of natural drainage, to one
acre of mineral wash in the
last 5 years?

A In the South Fork of
the American River?

Q Yes sir? A I think so.

Q And then you were di-
recting your attention to the
wash in the river?

A I asked the question, if
that was what you wanted
answered — The work of the
South Fork of the American

River, is there any question to be answered

Q. I ask you if you have reference to the wash of the South Fork of the American River?

A That is the question I answered, yes Sir

Q Now what is the difference in the depth of the natural wash and mineral wash there?

A The mineral wash is the small area of ground that washes into the American River from the mines is greater. But there is a very small portion

Q It is 100 times as deep is it not? A Some particular spot might be 100 times as deep.

Q Well generally making a general proposition is it not 100 times deeper than the wash from the top soil?

A Oh, no Sir.

Q Do you know of any place other than a mere gutter

on the sides of the mountain
there where the natural flow
of the rain has washed the
top of the soil to an extent
deeper than one inch, for
any considerable breadth?

A Yes sir, I know of sev-
eral places that it is washed
more than 30 feet.

2 That is where you have
these landslides?

A No sir, not landslides -
wash

2. Washed out more than
30 feet? A Yes sir

2. Over an area of one square
acre in one place?

A The channel -

2 (Int.) I am not speak-
ing of channels, I am speak-
ing of the surface of the
mountain generally - Can
you name any place - I
will put it in this form -

Can you name any place
where you can say there
were three square acres
that are contiguous to each

other that have been washed to the depth of one inch on the side of those mountains?

A Yes sir

Q Where is it?

A It is a place about 10 miles from the fork of the river going towards Silver Lake that washes out every year and refills again from the mountain, and washes out again - There is a large scope.

Q Where is that you say?

A I say it is about 10 miles from the fork of the American River on Silver Fork.

Q Where does it wash to?

A It washes into the American River.

Q Can you name any other place of that character?

A I do not know that you could ascertain the exact depth of how much the wash had taken off of the surface of a place, any other way than from the material

taken away from it

2 Do you know of any cultivated farm in the mountains where one with has been washed off of the surface

A I know farms that there have been large cuts taken out of and a great deal of soil washed away but I do not know of any way of estimating how much has been taken off of the entire surface. I could not perceive it perhaps with the natural eye if it had been evenly taken off of the surface. You could not estimate any other way only by the material taken away and reformed somewhere else
Q In speaking of the natural wash do you include old dumps of mines

A No sir

Q You do not include old dumps

A No Sir - let me understand

You in that last question
 I do not include dumps
 of mines after the mining
 is done and the dumps left;
 After that I call it natural
 wash; but where the effect
 of the mining water is upon
 the first displacement I
 do not consider it natural
 wash.

Q But I mean after the
 old dumps are put down
 into the Canyon or wherever
 they may go, you include
 the wash from them in the
 natural wash do you?

A Yes sir

Q Are there in Colorado
 County taken from the mines
 rocks that decompose after
 a number of years and
 form sand or wash away

A There are

Q Any considerable amount
 of that kind of rock?

A I think so yes sir

Q A large proportion of the
 rock is of that kind is it

not?

A A larger proportion from some mines than others

Q But take it generally
A Take the slate and granite formation both of them slack but take the quartz it does not

Q The slate and granite will decompose will it
A Slate and granite will decompose

Q And will wash away after it decomposes?

A Yes sir

Q Now you include that in the natural wash?

A That is natural wash

Q Does not that make up a very large proportion of the natural wash?

A No sir it does not wash as readily as the natural hill does

Q It does not wash as rapidly until it decomposes

A Well the decomposition is slow. You pass over these

large piles of tailings in time of heavy rain, and the water is comparatively clear that is running on them to what is that is running on the natural hill.

Q Is not the wash from those of such a character that a very slight amount of mud from the top of the mountains will cause a greater discoloration than a large proportion of the wash from these tailings?

A The color is greater from the surface than from the sand tailings.

Q So that you could not estimate the proportionate amount of the material in the water from seeing it, from its color, from the fact that the lighter material naturally flows on the top and the sand naturally gets nearer the bottom and it causes a not so great

discoloration as the light material that comes from the surface soil?

A There is but little sand on those dumps until they do decompose. The sand has been taken away with the first wash generally.

Q How long does it take one of those rocks to decompose?
A. Some of them sooner, and some later.

Q Is not their decomposition gradually aided by the passage over them of cobbles stones and other things, knocking off that portion of the rock which is decomposed?

A Perhaps it might be, but we do not know until it reaches the stream any of that action.

Q There is not any of that action?
A No sir, not in our mines until it reaches the stream and got down as far as Weber Creek or some other place

I speak of after the mummy has ceased and as they now stand, they are high and dry

2. Are they not in a position to allow the operation of the elements upon them to a much greater extent than the side of the mountain, don't they have more water passing over them and a greater force of water?

A No, not those tailing piles in my neighborhood, they do not have any water passing over them, any more than the rain fall

2. They do not? A No

2. They do not tail into the streams directly there then?

A They are not running in. The great tailing piles in my neighborhood are standing as dry as any other hill now, and no other force on them

2. They stand outside of the streams?

A The stop, the greater portion of them stopped before

the got to a stream and they have become so solid that it requires a greater amount of water to remove them again than it does the natural hill.

2 When was the great proportion of mining done in Eldorado County, when was the mining industry at its highest so far as extent of mining operations was concerned? A. From 1849 to 1860.

2 From 1849 up to 1860. It commenced decreasing at that time mining did it?

A Well, the surface mining did then, and all other mining they changed the mode of mining about that time and went into the hills. And the surface miners either went into hill mining, or ceased mining altogether.

2 How many more men were mining in Eldorado County between 1849 and 1862 than are mining in Eldorado County

now? A. I should judge
 there were 20 times as many
 2. 20 times as many actually
 engaged in mining?

Q. Yes Sir

2. The greater number of the
 mining villages that were
 constructed in the early days
 in Eldorado County have
 ceased to be towns have
 they not? A. They have

2. Become depopulated
 almost entirely and some
 of them entirely?

A. Yes Sir, some of our
 largest mining towns, Wea-
 vertown, Coon Hollow, and
 Cold Spring, were large min-
 ing towns at one time, there
 are not more than from one
 to six families living in either
 of them now

2. In estimating the amount
 of material that will pass
 down the streams from the
 mines, to be removed any
 distance from the dump
 what stream did you have

reference to ? A I had particular reference to Weber Creek, I have more observation on that stream than any other.

I that is the creek which you say has all the way from no grade at all to 10 feet ? A. I said from a very small grade to 10 feet, I do not think I said no grade at all.

I well, very small, probably I put your language a little stronger than you did, unintentionally however, and those muni are generally from 4 to 20 miles from the South Fork of the American River are they not ?

A. All the muni that wash into Weber Creek, in our neighborhood are 20 miles from the mouth of the Creek where it empties into the river. Those that wash on the river side are from one mile down to the river itself.

Q These dumps that you speak of, I understood you to say are not in ~~the~~ Weber Creek but on the bank of Weber Creek, so that they stand out dry?

A Yes sir

Q Is there any considerable force of water that is brought to bear upon the masses along Weber Creek to remove those tailings?

A Yes sir, in floods the force is very great. A year ago last Spring they moved a considerable amount of tailings away from near the road and carried away Morills bridge with it, the first time I have seen them move for a number of years.

Q That was on account of a very large flood there?

A Yes sir

Q About how much. What proportion of the material standing in the dumps was removed by that flood?

A. I did not perceive there were any dumps but what were in the creek — in the channel of the creek.

Q. Was removed?

A. A portion of it removed and it took Monell's bridge along with it.

Q. The amount of material which was actually moved down ^{the} stream from those mines as much as is carried into the stream by the water running out of the flumes of those mines, is it not?

A. Yes sir, that portion of it was.

Q. And a great proportion of the material being heavy stops right at the dump?

A. I think 80 percent stops between our mines and the creek which is about a mile.

Q. A mile from the mine to the creek? A. Yes sir.

Q. Does the creek ever reach the place where you dump it? A. No sir.

Q. So that there is nothing but the rain fall to remove those heavy rocks?

A. after the hydraulic pressure is taken off of it nothing but the rain fall.

Q. The hydraulic pressure only follows it to the end of the flume, does it?

A. That is all.

Q. How do you make your estimate as to the amount of material that is remaining at the dumps? A. From the amount that is deposited there, large banks of it, as large almost as the natural hill was above it.

Q. Did you ever calculate the amount in cubic yards?

A. I never have, no sir.

Q. Have you ever calculated the amount taken from the excavation of the mines in cubic yards? A. No sir.

Q. You have not?

A. No sir.

Q. Your estimate is a general

Estimate? a My Estimate
is a general estimate from ob-
servation of the dump and
from the Creek below

2 It is not based upon any
Calculation of dimensions, the
dimensions of these dumps or
the dimensions of the mine
themselves? A No sir

2 But is it a general Esti-
mate? a A general Es-
timate from observation

2 Your observation is simply
in looking at the dumps and
looking at the mine without
making any particular Estimate
in your own mind?

A And being acquainted with
the Creek all the way down
and seeing the deposits

2 And knowing also that the
dumps are ³ 1/2 mile or 1/2
a mile from the Creek?

A I am well acquainted
with the Creek to its mouth.
I estimate the amount
of material which is lodged
in the 18 or 20 miles that

it has to go after it gets
into the creek.

Q Now you say that in
1851 you examined the Smith
Fork — I think it was in
1851 and you found it clear?

A In 1850 it was clear

Q The creek was clear

A The river was clear in
1850. In 1851 it was not

Q In the fall of 1850 what
was the character of the
bottom of the river and its
banks at that time?

A Rocky

Q Composed of large or small
rocks?

A Generally
large and some small rocks

Q Most of them were very
large boulders were they
not, like those contained
in all mountain streams?

A That was the character
of them

Q Some of them I suppose
were as large as that desk
or nearly as large and some
larger?

A Some a great deal larger
 2 Some a great deal larger
 and the great proportion of
 them were of rock, from
 what size taking the smallest
 that is the smallest of the
 greater proportion?

A From pebbles to boulders.

2 But there was only a
 small proportion of pebbles?

A The greater portion was
 heavy rock.

2 Well, the greater proportion
 would average from 500 lbs
 upward, would it they?

A Well perhaps, from 100
 pounds up.

2 Where did you sleep in Sep-
 tember 1850 on the Sacramento
 River? A. It was on
 the East side of the river
 I think about 12 miles above
 here. I do not remember
 the man's name, I went up
 to get some horses that I
 sent up there to ranch and
 I slept there.

2 Were you on the bank

of the river?

A Right on the bank

I were you on the high bank

A I think 12 feet above the water.

I think you were 12 feet above the water at low water mark? A. The

stage of water it was in September of that year

I were you on a sand bar?

A No sir, I was on a grassy flat under some trees there

Q. At that point did the river run with abrupt bank or did it run gradually down to the river? A. I think pretty abrupt generally but there was a place there near where the man lived that you could take stock down to the river

Q Did you sleep in the house or on the outside?

A I slept outside under the trees

I can say you saw water marks 15 feet above where

you slept? a Yes sir,
 I should think they were
 10 feet, 12 or 15 feet

Q Did you measure it, or
 make simply a guess?

A I simply made a guess

Q Did you have anything at
 that time to call your atten-
 tion particularly to the
 distance, or to induce you
 to make a calculation of
 the distance above you that
 those things were? A I did

Q What was it?

A My brother was lying there
 with me and he had come
 here in 1849, and I asked
 him if it was possible that
 water ever got up there, and
 he said yes, and if I had
 been there the year before
 I could have seen it.

Q That was in 1849?

A That was in 1849 he
 came here

Q He said that the water
 was that high in 1849, at
 that point? a Yes sir

Q That was a low place then? A I do not know how it compared

Q Was it along near the tule? A No sir, there were no tules near us.

Q You say you do not remember the name of the gentleman whose ranch you were on?

A No sir

Q Have you thought of the distance since that time, the distance above you of what you called the water mark?

A I have

Q Often? A I remember telling my people at home about them. I had not seen any floods when I went home.

Q Is it not possible that the distance has grown in your memory, as things sometimes do as years pass by?

A I think not, no sir

Q How often have you told about this?

A I never

not remember that

Q You were on the bottom land at that time were you not, in what is known as the Lidesdorff bottom?

A On the bottom land, on the lands above here about 12 miles

Q Of what is known as the Lidesdorff bottom?

A The land this side of where I was, that I crossed over was called the Norris Ranch at that time — I do not know

Q Were trees very thick around you? A No sir, there were some trees along the bank of the river

Q No trees back?

A There might be some scattering ones, not much timber there

Q You say that was on the Sacramento or the American?

A On the Sacramento.

Q You say that there were no trees that you saw particularly there, excepting

such as bordered the river?

a I do not remember of seeing much timber back of us

2. How much lower was that than the high land back of you?

a My recollection is it was pretty level land from there back any distance that I saw. We went right up near the river from here all the way up, crossed the American and went up on this side. I have never been up there since.

2. What were those water marks?

a They were marks, uniform, along on the trees. What called my attention to them, that where a sediment looking rim was around the tree and bark below was stained with sediment.

2. Did it reach to the forks of the trees? a I do not remember about any forks

2. Do you know whether trees in this country all grow with forks after they get a short distance from the ground? a I saw I do not remember about the forks

I do not know that Ishmed remember about the tree being up there if it had not been for the circumstance of the flood getting up there

Q. You do not remember whether it reached the fish or not? A. No sir

Q. How high were these marks above low water mark, that is the water mark you saw in September?

A. I think they were from 2 to 3 feet

Q. How far is Fraser's land from Spanish Hill, Fraser's made land?

A. About two miles

Q. And you say that Spanish Hill was the mine, or at Spanish Hill the mine was that tailed into the flume?

A. Yes sir since thedraulic mining has ceased on Spanish Hill they have been found sluicing the tailings down that ridge below the mine through this flume and taken them down and dumping the below and immediately below that Fraser has taken them up

Testimony

of
N. A. Kadder

Called for dep't Sworn.

Mr. G. A. Allen Q Were you living
in Sacramento City in 1852
and 1853 along there?

A I was sir.

Q What business were
you engaged in?

A As a general thing
forwarding and Commission
Agent forwarding material
from the City, forwarding
and receiving

Q Where was your business
place? A My business
place - I lived in 1850 -

Q & in 1853 and 1854
was it in the upper part
of the City or on Front St?

A Down on Front Street.
I lived in different places.
I do not remember where I
did live hardly. I lived
in the City.

Q State what you know

in regard to the City pumping water out of the lower part of the City into the river, when that was first done to your knowledge?

A If I recollect right it was done under Ex-Mayor Stardenberg's administration in 1853 by Frank Nolan

Q Well state what water it was they were pumping out? A Pumping out surplus water than remained in a lower part of the City and within the R. Street levee

Q Where did they pump that to? A They pumped it over into the river

Q The Sacramento river? A Yes sir

Q Did you see that pumping operation?

A I did

Q State whether you observed it closely or not?

A Oh I did from day to day sir

Q Well describe it?

Alwell, Mr Nolan had a powerful wheel propelled by an endless chain with buckets. The water was led down to his pumping machinery and from thence it was carried into the river by a box or boxes, it maybe a sluice, boxes sufficiently elevated to throw it over

What was the motive power. A I do not know what the motive power was it was a pretty powerful pump

O Do you know whether steam or water?

A I think he propelled it by steam sir, there was no water

Mr Badwalader It might have been by a mule

Mr Batlin State how long he continued pumping there

A Oh I do not remember how long sir He pumped there for quite a while-

quite a while, I do not remember the time.

Olwell with what success? As I used to measure the water from day to day with a stick, put a stick down within the levee right in the work where he was pumping and sometimes he would lower it an inch perhaps in 24 hours or what he would pump in 24 hours, when he would cease to pump in the night the water generally rose back again and it kept about so high all the time. I do not think he lowered it over - my impression is he did not lower it over an inch in the portion of the 24 hours which he pumped. I watched it from day to day. I do not remember the time.

Olwell, state whether,

he succeeded in pumping the water out?

A As far as I remember he did not, after pumping a long time I think the City made some arrangement with him and gave it up

Q Well state what other dumping you know of later than that, years after that?

A Well, there are different persons, different parties have pumped at different times, Hubbard pumped for one - Hubbard and some one in Company with him, I do not remember that year.

Q Well about the year?

A He pumped quite a long time.

Q Well about what time prior to 1860?

A I declare I cannot say under oath what year Hubbard was pumping. It might have been in

1854 and 1855 perhaps somewhere there. It might have been later.

Where did he pump the water to?

As he pumped on R Street levee and pumped from R. St. over and threw it on the other side of the levee pumped from this side over to the other side.

Q Well state what kind of pumps they had?

A Well, they had bucket pumps. I think they called them Chinese pumps as near as I can remember.

Q State with what success they pumped? A Well, they lowered the water some in the City but they did not free the City from water as far as I recollect. As the water receded in the river the same water that percolated in coming through

The soil receded again and passed out. That is my impression about it my memory about it

Q Do you recollect any other parties pumping besides Stubbard?

A Yes sir. They have been pumping since that, pumping only a year or two ago

Q I am speaking of the times before 1860 and those early days - do you recollect of anyone else?

A I do not recollect of any pumping - after Nolan pumped I do not know of any pumping until Stubbard and Co. did. There might have been, but I do not recollect any.

Q Do you recollect of Amstrongs pumping any?

A He did pump there, I would not say whether it was before or after

Stubbard - yes he pumped there

Q Do you remember when or about when?

A I could not tell you whether it was prior to Stubbard pumping or afterwards. I do not recollect

Q Do you recollect whether it was before the big flood of 1861 and 1862?

A Making no note of the thing entirely as it is so long since I would not like to state whether it was before or afterwards

Q To what extent did the water cover the lots in the lower parts of the City between L Street Bay and R?

A Well you speak of the heavy floods, the freshets?

Q At the time they were pumping?

A Oh about 6 feet deep.

It varies, some ground is higher than others - it is higher at some places than others, it may be 6 feet and it may be 8 feet

Q How many blocks?

A Oh it covers I don't know, perhaps 40 blocks maybe. I do not know how many without calculating

Cross Examination of N. A. Kidder

Mr. Caldwell Q You do not know how many blocks it did cover do you? A No sir It depends altogether on the continuance of the river, the height of the river, that the water percolates in and the longer it remains after a certain height the water being higher inside than inside

it comes through and fills
away down perhaps to
M or N Street and from
thence down taking it
below 6th Street and down
to 3rd

Q Mr. Ballin got you to
say that it might be 400
blocks? A I do not
know how many blocks
there are. I speak more
from guess work about
that than anything for
I do not remember.

Q It would be a pretty
wild guess - water never
went beyond 6th Street
did it? A No sir -
yes it has gone beyond
6th but not usually
beyond 6th, but take it
from 6th to 3rd

Q It would be from 3rd
to 6th would it not?

A Well now, I presume
you speak within the
R Street line?

A Yes It would be

in this City during that time were not on 2nd and 3rd Streets?

A I do not know as I really understand you

Q I will ask you, in those days whether the principal residences in town were not on 2nd and 3rd Streets and north of Q

Mr. Catlin Subject to the question as not being cross examination and also as being irrelevant and immaterial

Mr. Caldwell It is within the 40 blocks

Mr. Catlin It is immaterial whether there were any residences there or not.

The Court So as to show that they were not covered.

Mr. Caldwell To show that they were not covered

Mr. Catlin Suppose the principal residences were not there, how would

that affect the question? whether the water came there or not, I cannot see how it would be material upon the question as to how extensive it is.

The Court It may refresh the witness's memory. I do not know. go on.

A There were not very many residences above 3rd up to 6th.

Mr. Caldwell That is not what I asked you; whether the principal residences in those days were not on 2nd and 3rd? A Yes sir, the principal residences were perhaps on 2nd, on the levee and on 2nd and 3rd.

Q During the times when Nolan was pumping and Ambrough and Stubbard? A At that time there were not many residences

above Col. Sanders' house.
until you get up to 6th

Q Col. Sanders lived
there and Staggin and
E. F. Hastings and Judge
Munson? A And Mr
Watson and Will Woodland
several lived down there.

Q There was no water
on those sheets during
this time when pumping
was going on? A I cannot
remember whether there
was or not.

Q Well the R. St levee
was constructed out of
dirt taken out of R.
Street was it not?

A Yes sir On this side
of R. Street

Q Digging a very
heavy ditch?

A On this side of R.
Street.

Q Where the Nolan
pump was used - where
was it? A The Nolan
pump was very near

the R Sheet levee

Q It was very close to the river was it not ^{yes} ~~very~~ near the river?

Q And it was a single pump was it not?

A It was a very big wheel, an endless ~~of~~ chain with buckets running over and over throwing the water into the conductor which conducted it off

Q Well it was a single pump was it not?

A So far as I remember it was.

Q The same way with the Amstorough pump?

A The Amstorough pump if I remember about it, although I do not seem to have a ^{very} great recollection about it anyhow. I know they got what they called a Chinese pump at a very early day and they found it answered

a better purpose than the other kind of pumps

Q All that pumping was over before 1857 was it not?

A I do not know whether it was or not

Q And then there was no pumping there between 1857 and 1878 was there?

A Excepting last year

Q I will ask you if there was any pumping in the City between 1857 and 1878, just think a moment?

A I do not know that there was I am not sure

Q You are pretty well satisfied that there was not?

A I never have taken any notes of it, of course not bearing it in my mind I do not like to testify to what I cannot clearly recollect about it

Q Well the first pumping of late years, commenced in 1878 did it not?

A Yes sir it did

Q And then there was pumping in 1881?

A Yes sir

Q In 1878 it was caused by the Lovedell break was it not which backed the water up to R Street was it not?

A Yes

Q In 1881 it was caused by the Mexico and Fern breaks which backed the water up to D Street? A Yes sir.

Q I will ask you whether there were not houses on every lot North of R and West of 6th? A Maybe on every lot Q. You do not know of any exception, do you? A Yes there are exceptions I think now. I do not know that there are many.

Q. You recollect the character of this pumping in early times whether it was insignificant?

A I recollect the chief part of the pumping never had the effect of lessening the water in the City. I used to contend that all the pumps between here & San Francisco would not keep the water out when the river was high.

E. C. Uren.

Called for defendant.

Testified.

Mr. Cadwalader. Did you make that paper for me?

A Yes I wrote it out.

Mr. Cadwalader. Give it to me please.

(The Witness produced paper.)

By Mr. Byrne. 2. I now present this memorandum or statement. When you were on the stand before you were examined in reference to the fabricated statement, that you now hold in your hand as to its correctness. Some question was raised as to your knowledge of the facts on which that estimate was based. Will you now state to the Court the means, the sources of information upon which you base that statement?

A Yes. When I had been down on the river on the first time, or down making my survey, it was thought best for to have more parties to examine as to the depths of the river; and when the other went down, I

was unwell and was not able to go down with them. After they got through with there examination of the depths, they sent me a written statement of the depths and from that statement I based my calculations.

Q. From any other source, did you make this estimate?

A. Well from the slopes of the river, the banks of the river that I took. There was plenty of room for that depth, and to exceed that depth giving the width, the original width of the ~~battle~~ river as testified to by other parties.

Q. You have already testified that you are a Civil Engineer?

A. Yes.

Q. And that you have been for a great many years past, engaged in making surveys in that particular portion of the country?

A. Yes.

Q. Are you familiar or have you been familiar with the American river and of so

for how many years?

Mr. Badwalader. He has been over all that. He has already answered that in the affirmative.

The Witness. I have crossed the river.

Mr Byrne, 2. State to the Court your knowledge of that stream and your experience in reference to it and the sources of your information in regard to the slopes of the bank's ~~mapon~~ upon which you have fully or in part based your estimate.

Mr Badwalader. He has already done that. He has been into that.

The Witness. I have crossed the river on the way to Iowa Hill at the different bridges that were built near ~~Harb's~~ probably 50 times and may be more. I have also crossed at Stevens bridge and have walked up the river for miles. The trail passes on the side of the river for probably a mile and a half before it leaves the river for any distance. I

have also crossed at Rices bridge many times. I was never up and down the river in the bed of it but once, this last fall.

Mr. Cadwalader. What is it that you want to get at?

Mr. Byrne. The witness will tell you in a moment.

Mr. Byrne. I. Do you know as to the slopes of the banks of which you have just spoken?

A. The slopes of the banks are -

Mr. Cadwalader. Inty. > We claim that this witness has been all over that before.

The Court. I do not remember. He made a survey and testified to the width, length and some of the levels I think. I do not remember whether he spoke of the slope or not.

Mr. Cadwalader. On the direct-examination he was permitted to state all those things, but he was not permitted to give the result contained in this document, because the depth had not been measured by

him and now he says he has not been there since.

Mr. Byrne. I understand the ruling to be that the Civil Engineer, or an educated witness and an experienced witness an expert, if you please is permitted to base his testimony upon statements that are made to him by others in part and by his own personal observation of certain physical facts.

The Court, There is no objection to that yet.

Mr. Byrne. I thought there had been an objection made.

The Court, This objection is that the witness has been over it before.

Mr. Byrne. I disagree with Mr. Cadwalader on that question?

Mr. Byrne I. How many persons, and what persons informed you that the original depth of the river, as compared with its present depth, has itself filled up with tailings?

Mr. Cadwalader, I object to that

upon the ground that it calls for information based upon hearsay and because the same question has been asked and answered by the witness.

The Court My recollection is that he was asked, but I am not sure whether the testimony was stricken out or not.

Mr. Cadwalader. He was permitted to show just what he saw there.

The Court I suppose it will not take much time to have him give the names again.

Mr. Cadwalader. It will render necessary a very long examination The Witness I do not remember mentioning those names.

Mr. Byrne. He did not mention them. His estimate was rejected then because he did not state the sources of his information.

The Court My recollection is that it was objected to because it was hearsay and that it was stricken out until these ^{parties} ~~proofs~~, whoever they were would be put on the stand.

Mr Byrne. Every one of those witnesses since has been on the stand and has testified.

The Court It will not take long to tell the names. I suppose the idea is to prove that these men have been on the stand.

Mr Cadwalader, There is ~~no~~ objection to that?

The Witness Mr Van Vactor, Mr. Warner, Mr Beers and Mr. White.

Mr Cadwalader. I do not recollect of ~~any~~ those men.

The Court, They were all examined.

Mr Byrne, 2. What did they state to you, as to the original depth of the river and to what extent did you base the calculation, which you have there before you in figures and in writing upon their statements.

A. This is from their statements.

Mr Cadwalader, Subject to that except as so far as it furnished him with material to make the table from it.

The Court Go on.

The Reporter reads the question. >

The Witness. I took their figures for at the several points that we met in the survey, they ~~gave~~^{went} over every point and gave the depths according to their judgment I suppose, at all those points.

Mr Byrne. And you have already stated that in addition to that you calculated the slopes of the banks.

A. I calculated the slope of the bank and the ~~slope~~ of the bank will admit of a greater depth than what they have given according to the estimated width of the bed of the original river.

Q. In making your survey you divided the river into sections? Yes.

Q. What was it in your last section above Rice's Bridge?

A. 1780 feet.

Q. What was the grade of that section?

A. The grade of that section is 8.3 feet.

Q. On 1780 feet? yes.

Q. How many feet would that be to the mile?

A. 24.62 feet to the mile.

Q. What quantity of tailings were in that section?

A. There were scarcely any, from six feet at the upper end to five feet at the bridge.

Q. Why in your judgment was that so?

A. There is no filling there on account of the grade. It would never reach there. The grade ^{above} is about double what it is at that point.

Q. So I understand you to say that if tailings came down from the Gold Run mine at that point, they would have remained there in that flat portion of the river.

A. There is no doubt about that for the reason that there is a narrow channel above.

Q. Have you any doubt about that as a Civil Engineer?

A. No sir.

The Court. The table is now offered in evidence, I presume. Mr. Byrne, If your Honor thinks it is sufficiently proved.

The Court. I do not know whether it was stricken out before or not. Mr. Hart. It was then stricken out and we will make the same objection to it now if it is offered.

Mr. Byrne, We offer it ⁱⁿ evidence as having been sufficiently proven - this tabulated statement.

Mr. Hart. We object, that it is incompetent and that the witness can not be permitted to testify to an account that is based on hearsay.

Ex. The Court overruled the objection and Counsel for plaintiff excepted.

Cross Examination
of
E. B. Uren

By Mr. Leativalader, I. Has this paper been in your possession ever

since you were here, before.

A. No sir. This is the first that I have seen of it since it was brought into Court, the first time. I have a copy of it in my pocket.

Q. What I want to get at is this: whether this matter in pencil was there when you presented it?

A. No sir I guess not. I never saw that pencil writing before.

Q. That is writing is that?

A. I do not know, I can not tell.

Q. That is in your handwriting printing.

A. That is mine, yes.

Mr. Badwalader, Some person has written here that the depth for the last 1780 feet was - Mr. Bynne (Intj.) That was written before the paper was introduced. If you want me to prove it I can do so.

Mr. Badwalader. It is not necessary.

Mr. Bynne. The paper is now just as it was when it was

originally offered in evidence.
Mr. Cadwalader 2, you saw no
 tailings of any consequence
 at the foot of that 1780 feet?
A. There is only six feet at the
 head and five feet at the
 lower end — that is the esti-
 mated depth.

2. Give us some idea of the
 amount of material that has
 passed over that plain of 1780
 feet?

A. I do not know that any has
 passed over except what has
 passed over in suspension. It
 is very flat. The grade is
 very low in that section.

2. That is not what I ask
 you. I ask you to give me
 some idea of the amount of
 material that had passed over
 that plain?

A. That had passed over it?

2. Yes?

A. I do not know
 whether I can do that.

2. Give me some idea of it?

A. What has passed in suspen-
 sion, of course I do not know.

Q. No, I mean what has passed over that plain?

A. There has no material passed over the plain ^{of the} character that is above it. It could not pass over.

Q. I have not asked you that question yet. Give me some idea of the amount of material that has passed over that section of the 1780 feet?

A. I can not see what you are getting at. I do not understand.

Q. It is not necessary for you but I will ask you what kind of material has passed over that plain?

A. I do not know.

Q. What would you figure it at?

A. Of course there is a great deal that has been washed away, that has gone through, washed out of the Gold Run Hydraulic Mine, that can not be accounted for in the river.

Q. Give me some idea of how

much material you think has passed over that section?

A. I could not do it.

Mr. Byrnes I object to this. It is indefinite.

Mr. Cadwalader. I will put it in this way. You know of 70 millions having passed there, do you not?

A. Passed that place?

I Yes. A. I should suppose there have to take the Iowa Hillside and the Gold Run too.

I. I am not talking of the Iowa Hillside?

A. There has been no 70 millions washed out of the Gold Run claims according to any statement that has been made.

I. I will put it in this way then so as to be enabled to get an answer: What did you estimate the extent of the upper workings at Gold Run?

A. 65 or 67 millions I think.

I. That has all passed has it not?

A. The biggest part of that has passed.

Q. Well it has all passed has it not?

A. I do not know, that it has.

Q. How much has passed that came in from the other side the Iowa Hill Mines?

A. I do not know. There has been some washing done there for several years.

Q You do not know how much it is do you?

A I have heard it stated there by parties that have measured it I do not know myself

Q That makes over 70000000 does it not

A I suppose about that probably

Q What would be the force of the water over that particular plane for transporting purposes Tell us that as a Civil Engineer
A At what stage of water do you mean?

Q What would be the force of the water passing over this plane that you say is 1780 feet long and having an average width of about 160 feet and a grade of —

A (Interrupting) You have got on the wrong side of the table there.

Q And a grade of 23 feet

A That depends upon the volume of water of course

altogether

Q You say you have been across the River for the last 20 years so as to become familiar with it?

A Yes.

Q Give us some Idea of the transporting power of the water?

A I never crossed the River at its high stage as a general thing nor in a very high stage of water for the reason that we make our surveys in the summer time

Q You have you have been presented here as a Civil Engineer. Now I want you to give me some Idea of the transporting power of the water

A It depends entirely on the Velocity of the water of course it is said that water running at five miles an hour will wash pebbles - these angular pebbles. We find that in the formulas but whether it is true or not I could not say

Q Give me if you can or say that you cannot some idea of the transporting power of the water over the section of the River as you have here described it.

Mr Byrne With how much water?

Mr Cadwalader As the water is as he has seen it at different seasons of the year for 20 years.

Mr Byrne At the different seasons.

The Witness Do you refer to some particular stage of the water some height?

Q Take the highest stage of water.

A I do not know what it is — what the highest stage is there.

Q Do you know anything about the River?

A I do Considerable, The water used to be a great deal higher than it is now probably doubly as high on

account of the narrowness
of the Channel

Q When was that

A Before the filling

Q Well when

A When I have passed over
that River in early days
and there was no filling in
it, I never paid much
attention to it at that time

Q How much does the River
rise there now?

A I do not know how much
it does rise

Q What is the distance
from low to the high water
mark?

A I do not know the high
water mark there

Q Is it a foot

A Yes I guess probably it
rose 10 or 12 feet - more
than that as far as I
know

Q Does it rise 20 feet

A I hardly think it does
not at the present surface
of the River -

Q How much does it rise
A I do not know.

Q About how much would
you say

A I do not know that I
could make any statement
as far as the height of the
water is concerned. I never
saw it at its highest
stage

Q Are you not willing to
risk any kind of an opin-
ion

A I do not see what good
it will do to risk an op-
inion without I know it

Q What was the velocity of
the water at its highest
stage that you have seen it
there?

A I guess the velocity of
the water has been as much
as 10 or 12 miles an hour

Q You have seen the water
there 20 feet deep have you
not?

A I never did.

9694 Q How deep have you

Seen is ?

A I think I have seen is probably ten feet deep.

Q Now I will give you this: You have a section of the 1780 miles long with an average width of 166 feet and the River is 8 feet deep and its velocity is ten miles an hour. Now tell me what kind of material would move over that surface - what would be the heaviest materials that that water would carry ?

A It depends entirely on the shape how you lay it in the bottom. If it laid in the shape of flat pebbles or flat rock it will take a great deal of force to remove them.

Q How ?

A It will take lots of force to move them. Heavier boulders will sometimes go over that which lies under them.

9635 Q That is not what I asked

you give me the maximum
or the largest material that
the water transport?

A I do not know that I can
give it to you.

Q You are a civil Engineer?

A It is not necessary for a
Civil Engineer to know that

Q You mean not to know the
transporting power of water?

A That belongs to hydraulic
Engineering.

Q And not to Civil Engineering?

A I have calculated the velocity
of water for ditch purposes

Q I am speaking strictly in
the line of your profession
as a civil engineer. I ask
you whether that does not
embrace the transporting
power of water - that is the
power of water in transporting
solids.

A It does take it in in
some of its branches

Q Is not that the particular
branch of Civil Engineering
that you are most familiar

with ?

A No sir it is not. Mining Engineering is what I am familiar with.

Q. So you pretend to be anything except a mining Engineer ?

A I pretend to be what we call a Civil Engineer.

Q In what branches ?

A In the branches of Rail Roading or in Ditches Canals and as a mining Engineer I have had to run tunnels shafts etc, That belongs to Civil Engineering.

Q So you know the transporting power of such a volume of water

A I do not

Q I will ask you whether water according to the established rules - rules that a Civil Engineer ought to understand would move rocks weighing ten tons ?

A No sir

Q It would not ?

A No Sir

Q Suppose there was sand on the bed rock there what kind of water would carry that sand away from the bed rock.

A What kind of water?

Q What velocity of water?

A Well four miles an hour would move sand over a smooth surface

Q With a grade of 20 feet to the mile?

A I am talking about the velocity. It does not matter what the grade is

Q It does not?

A No sir the velocity is all that needs to be calculated.

Q You say if there was sand there it would take a velocity of four miles an hour to move it?

A I will say that it will move four miles an hour over a smooth surface.

Q Would not $2\frac{1}{2}$ do it?

A No sir

Q Nor according to the tables

A Nor according to the tables I have seen

Q Have you ever seen a table?

A Yes.

Q (Interrupting) That did not state that a current of a mile and a half an hour would move sand?

A No sir I think not. I think two miles and a half an hour will move sand

Q Will not two miles and a half an hour move gravel

- I am talking of the tables

A Different formulas have got it differently. They do not all agree.

Q I mean the tables you have spoken of?

A I think that two miles and a half an hour will move sand on a smooth surface.

Q Will not two and a half move gravel?

A No Sir

Q And will not four miles move stone an inch square
A Yes if the are angular, nor if they are round and smooth like our gravel is in the mines

Q Will not two miles and a half move gravel?

A No Sir.

Q You are sure of that?

A I think I am.

Q As large as a birds egg?

A I think not

Q Now if you can I want you to answer this question Or say that you cannot answer it; do you know what water 8 feet deep and travelling at a velocity say of ten miles an hour on this plane, what kind of material it will move?

A I do not know what sized material it will move.

Q You do not know, It is evident that you do not. If you do not know what kind

of material it will move
 What do you mean by saying
 in reply to Mr Byrne that
 the stuff above that could not
 get down

A I mean this; that from
 Stevens bridge down to a
 point on the upper part of
 that section it has a grade
 on the surface of over 38 feet
 to the mile and from there
 down to the bridge it has
 got less than 25 and the
 deposit has thinned down
 from Stevens bridge to
 nothing at the upper end
 of that section. And I say
 if that material was brought
 down on to the other grade
 it would be there today.

Q Is it the grade and
 not the velocity of the current
 which determines whether
 matter will move or not

A The velocity is greater on
 a heavy grade than on a
 light grade

9641

Q Did you not say that a

moment ago

A no sir

Q you say that the grade has nothing to do with the movement of solids?

A I did not say anything of the kind. I said the Velocity is the main thing to calculate from because a small stream of water over a heavy grade will not move as fast as a large body of water will move over a light grade.

Q When I asked you whether sand would move more readily over a heavy grade you said it depended exclusively on the Velocity of the water?

A I say so yet

Q And yet you do not know anything about the transporting power of water

A I never studied that in Rivers. My attention has not been called to that before

Q you never had occasion in your life to ascertain it

I suppose

A I have had occasion to find the velocity of water in Canals and Ditches so that it would not scour and destroy the ditch.

Q You never had any occasion in your life to estimate what the transporting power of water was over solids?

A No sir nor particularly I nor at all on any occasion in your life.

A You can have it that way that will do.

Q How do you answer that

A I say I have never been called to do anything of that kind - to make any estimates I never at any occasion in your life?

A No sir

Q You have never had occasion to solve that problem and consequently you do not know anything about it

A I do not claim that. I think I do know about it

Mr Byrne State what you do know about it?

A I know very well that it will take a certain Velocity to move dirt.

Mr Cadwalader What Velocity
A Anywhere from two and a half miles up will move from sand up to gravel
Q It takes ten to move gravel?

A No sir, not small gravel

Q What will move it

A Well four to five miles an hour will move gravel one inch in diameter, that is Angular stones not gravel

Q Suppose a current two miles an hour will move stones one inch each way what size stones will a current four miles an hour move

A I do not know that

Q I will ask you whether it will not move stones 64 times as large?

A I think not sir. I do not

See how you get at that
 Q I will state that again:
 if a current two miles an
 hour will move a stone one
 inch square whether by dou-
 bling that current it will
 not move stones 64 inches
 square?

A In the first place Current
 two miles an hour will not
 move stones.

Q I am not asking about
 that?

A I do not know the difference
 in the velocity - what it would
 make.

Q I will ask you whether
 that is not an elementary
 principle in Civil Engineering
 A It might be in that
 branch of Engineering.

Q That is a branch you
 know nothing about?

A I do not say I know
 nothing about it, I have
 studied it so far as my
 business called me to it

7645 Q Stand up at that map

and put your finger at the place where the deposits were made this year from the Iowa Hill mine?

A I do not know that I can do it, They have not been washing any this year that I know of.

O Suppose they have. Stand in front of that map and put your hand - put your finger on the points where the deposits come in?

A You mean where the Ravines come down from the hill.

O yes?

A Will you help me find the place?

O It is marked in red on that map?

A There are two coming in here (pointing). Stephens Ravine is marked. I suppose that means the ravine (pointing). There is an under current marked there that is in the Ravine. And there

is another point there that is called Warners Ravine on my map. I do not know the names of those Ravines. I know they are about midway between Canyon Creek and Rices bridge?

A Somewhere about midway Mr Byrne you mean Hipsens Ravine?

A No sir I think this lower Ravine is called Jamison Ravine.

Mr Godwalader It would be midway between the point 1780 feet above Rices bridge and Canyon Creek - I mean these Iowa Hill Ravines?

A They dump in here and here and in this place (pointing)

O What I want to get you to say is that they are about midway between the mouth of Canyon Creek and this point 1780 feet above Rices bridge?

A The lower one is I suppose

Q So they not average above that or nearly so

A The upper one is nearest to Canyon Creek

Q Now suppose these Iowa Hill mines had commenced operations this spring and had been worked down to say the first day of August or thereabouts that would have been during the low water season or a part of the low water season would it not?

A What do you mean - if they would start now

Q No sir I am speaking of the working season of 1881?

A Of last year

Q Of last year, suppose they had been worked during the low water season, would not that account for there being apparently such a heavy deposit commencing 1780 feet above Rices bridge?

A Is that your question

O Yes

A I think not for the very reason that the filling apparently falls off gradual from Ford's bar, There is no change in the filling at this point where the Iowa Hill dumps come in, not at the time I was there. The grade was very near uniform all through.

O Would not the Iowa Hill dumps make a greater deposit above this point 1280 feet above Rice's bridge in the summer than in the winter

A Of course. It would naturally accumulate in the summer time to a certain extent. That is it would accumulate immediately at the dump

Q- You would expect the winter water to wash that all out would you not?

A- I would expect that it would wash it down the regular grade until the force of the water was gone and it would not wash it away further.

Q- You would expect the Winter water to do that would you not?

A- Yes I would.

Q- So the heavy deposit which you found commencing at a point 1780 feet above Rees Bridge can be attributed in part to the Iowa Steel deposits during the last summer?

A- There is no doubt that the Iowa Steel dump helped to increase the tailings at this point.

Q- Like the summer deposit?

A- The summer deposit of course would stand nearly around the dump.

There would not be water

enough to wash it down and it would be higher than at the other points.

Q- And by the same course of reasoning you would attribute some of the deposit to the Summer workings of the Gold Run Mine?

A- Of course.

Q- And naturally next Spring you would find nothing there at all?

A- Nothing at all?

Q- Yes? A- I do not know what you mean.

Q- I will put it to you in this way: if the Summer water would force the tailings from the Gold Run and the Iowa Steel Mines down as far as Rice's Bridge, the Winter water would sweep them far below!

A- The Summer water did not carry the tailings but very little below their dumps. They accumulate there during the Summer

and ⁱⁿ the Winter seasons
they was taken out onto
a regular grade until
they lodge or stop.

2- That is not what I
asked you. I asked you this
and I want you to answer
it to; that if the Summer
water would carry the
Gold Run tailings, the
heavier tailings of the Gold
Run and of the Iowa
Mill mines down as far
as Ford's Bridge say, the
Winter water would carry
them far below Rice's
Bridge?

Mr. Byrne I ask that, that
question be separated. Counsel
is asking the witness as to
the distance the Gold Run
tailings would be carried
and also the Iowa Mill
tailings and the Mines
are several miles apart

A- I would like to ex-
plain this to Mr. ~~Boadwin~~
the condition of the River

if he will allow me.

Mr. Byrne The Gold Run Mine is several miles above the point of discharge of the Iowa Steel tailings. It is manifestly impossible for the Witness to intelligently and correctly answer that question. It is confused because the result on the tailings on the Gold Run Mine might be quite different as to the result on the tailings on the Iowa Steel Mine. All I ask is that he be required to separate the question and divide it into two questions if you please and the he first answer how far the tailings from the Gold Run Mine will go.

The learned He is not asking that at all. There is no such a question in it. It is a hypothetical case that he is stating.

Hee is not asking how far every tailings are carried. He simply says if one tailings is carried so far will not another be carried so far and perhaps neither is correct.

A- I can not understand that question.

Mr. Leachwalder I will put it in this way: will the Winter waters carry the tailings that are put into that stream by the Gold Run and the Jawsa Heel Mines further than the summer waters?

A- Of course, yes.

Q- What is the difference in their transporting power

A- I could not tell you that. At Gold Run they dump into Canon Creek in the summer time and they lodge immediately below Canon Creek and the Winter freshets take it.

frame that high grade and carry it below. At Fords Bar there is a very broad place and there it catches all that comes out of the Gold Run Mine. It is so wide there that it can not go any further possibly - the heavy material.

A I do not understand your question.

(The Reporter read the question)

A I was trying to explain that. I said that from the Gold Run dump in the summer time it loaded right at the mouth of canon.

Mr. Leadwala. I move to strike out that answer.

The Witness It will depend entirely on whether there is a fresh some miles.

Q Will where there is a fresh there?

A I do not know how far it would carry it.

Q Have you any facts from which you can form an

opinion - take the biggest freshet that you have ever known?

A. It will carry them over a high grade.

Q. Take the biggest freshet that you have ever known?

A. I do not know what it would do. I have never seen it on the river and do not know anything about it.

Q. Now you pretend that there are some particular inequalities in the grade of the River do you not?

A. I have never pretended anything of the kind in the grade of the river?

Q. Yes? A. Yes there is a difference in the grade. I thought you meant in the uniformity of the ^{running} water.

Q. You did not give the grade of the river did you?

A. I have not got it there in the table.

Mr. Leathin He has given it in his testimony before.

Mr. Badwalachu Did you give the grade of the river before?

A- I never did, no sir, not in my examination last year.

Q- You never did survey the river for grade?

A- Yes I surveyed the river for grade at the same time I surveyed it for length and width. I have the grades in my field book in my pocket now.

Q- I ask you what was the minimum grade between the mouth of Canon Creek and the head of Pickering's Bar? You recollect what you said when you were examined before?

A- I have never leveled that portion of it.

Q- Do you recollect what you said? A- I do.

not remember.

Q- Did you not say that it was 35 feet?

A- I think not. I did not say anything of the kind.

Q- The minimum grade?

A- I did not say anything of the kind. I might have said fiftyfive. I beg to be excused. I think that I was speaking of the flat places between Pickering's Bar and Canon Creek. There is one little place there I know it is flat. I know it from the time I surveyed it for a patent. That might have been thirty-five feet.

Q- Now all this heavy material that you found below has passed over that thirty five foot grade has it not?

A- Yes. There is some that accumulates there.

Q- You said there was no accumulation between

the head of Pickering's Bar
and the mouth of Occanee
Creek to speak of?

A- I said it did not ac-
count to much.

Q- It did not account to
anything? A- No Sir.

It did not account to
much of anything.

Q- That had all passed
over this thirty five foot
grade, by what force?

A- By the force of the water
of course, it must.

Q- At what velocity
would you suppose that
heaviest material would
pass over that grade?

A- It would depend on
the velocity of that portion
of the River. I do not
know from my own
knowledge that it was
as little as thirty five feet.
It might have been
fifty five feet. It is a
very short distance that
it is flat through there

Q- It would be just about what it was down at Rice's Bridge would it not?

A- I think not. It is less than twenty-five at Rice's Bridge or from Rice's Bridge up.

Q- Twenty-five and thirty-five does not make much difference?

A- It makes considerable difference.

Q- What is the grade below Rice's Bridge?

A- I do not know.

Q- You say there is no deposit at all there?

A- None at all what you might call deposit.

Q- You would be safe in saying that there had been twenty-five hundred millions of cubic yards of heavy material have passed over this 1780 feet section since the bed of the River was fixed by nature at its present grade?

A- I do not think I would be safe in saying anything of the kind.

Q- The bed of the at river is solid rock is it not?

A- I suppose it is but I never saw any of it.

Q- That has been done by something has it not?

A- It has been scoured out in ages. I do not know how long it has been done.

Q- That was done by something by some force - by the water was it not?

A- Some of it probably was and some was not.

Q- What was it done by?

A- Some convulsion of nature probably that first opened the chasm.

I do not know.

Q- You saw no signs of any convulsion of nature there?

A- I saw what we call the Giants Gap which

has almost vertical sides
for almost 2000 feet high.
It looks to me more like
a convulsion of nature
than the action of water.

Q- You saw the same thing
at Niagara?

A- It is a long time since I
saw Niagara and I do not
recall.

Q- What I want to get at is
has the water in that
stream cut in the solid
rock down to a grade of
35 feet below Canyon Creek
and 25 at Rice's Bridge?

A- Twentyfive at Rice's
Bridge and above.

Q- And 35 above?

A- I do not know whether
it is 35 or 55.

Q- That was done by water
flowing over the rocky
surface? A- I suppose
it was.

Q- What is the grade—give
me the grade of the section
commencing 1780 feet above

Rice's Bridge where you say it is 35 feet to the mile?

A- I have not separated that particular in my notes. We only took the grade from the surface down from Rice's

Bridge to a point that I spoke of. There is 36 feet I think to the mile from Steven's Bridge to Rice's Bridge.

Q- How far is that?

A- About two miles and a half I think. I can give you the exact figures.

Q- From Steven's Bridge to Rice's bridge it is 36 feet to the mile? A- Yes.

Q- And it is about two miles? A- About two

miles and a half I think. It is over twelve thousand feet anyway - 12114 feet.

Q- What is the minimum grade on that 12114 feet?

A- Taking the grades down the River we took it at the points - when we made the survey for the

meanderings.

Q- That is ^{not} what I am asking you?

A- I wanted to explain. For instance some of these levels have been obtained on high points - on bars on the present surface of the River. Some places they were six feet above the water where the levels were taken.

They were the most convenient points at which to take the levels.

Q- Give me if you can the minimum grade in that 12000 feet?

A- It would not give any idea in regard to the grade of the river because some points are high and some are low.

Q- I want to get at the minimum say between Stevens' Bridge to a point 1780 feet above Rice's Bridge.

A- There is one point here where the backsight

was four $\frac{62}{100}$ and the front
sight $9 \frac{45}{100}$.

Q- Give us the minimum
grade? A- There is a
point here of 848 feet that
has got less than five feet

Q- Less than five feet to the
mile? A- Less than
five feet in that distance
of 848 feet.

Q- That would be about
32 feet to the mile?

A- There is one point here
I think the distance is
381 feet that has less than
one foot fall.

Q- That would be about
16 feet would not it?
If it was one foot in
300 that would make
it about 16 feet to the
mile would it not
or seventeen and one
half? A- About that.

Q- It would be about
seventeen and one half?

A- All those levels were
taken at those convenient

points.

Q- You found a lower minimum grade than between Stevens' Bridge and a point 1280 feet -

A- No -

Q (Int.) One moment - between a point 1780 feet above Rice's Bridge than you did between Rice's Bridge and a point 1780 feet distant, did you?

A- No Sir. I did not. From Rice's Bridge up the filling was only six feet at one end and five at the other the river was flat and taking it in the bed of the River of course that gave the grade nearly - the grade of the original bed. It was only one foot higher at the upper end. I found also that the original bed of the River is less than 24 feet from Rice's Bridge to Stevens Bridge.

9666 Q- Then give me the minimum grades between

Stevens Bridge and the point 1788 feet above Rice's Bridge?

A- Yes.

2- What is it? A- I gave it to you just now about 5 feet less in eight hundred and something.

2- That would be 32 feet?

A- That was one that I gave you and the other one was only one foot in 381.

2- That would be $17\frac{1}{2}$?

Now go from Stevens Bridge, give me the grade above Stevens Bridge to your next point?

A- There were bars left in the River as much as six feet high.

2- What would you give me as the minimum grade between the head of Pickering's Bar and the mouth of Canon Creek?

A- I did not level that.

2- You stated sometime ago

that it was about 35 feet?

A- I suppose so. I do not know. I give that as my opinion.

Mr. Byrne To the mile?

Mr. Badgerladu Yes, to the mile.

Q- Did you not say the other day in your testimony when you were examined here that the bed of the river from the head of Pickering's Bar down to Rice's Bridge was graded just about as it would be for railroad purposes?

A- I said it would make a very good railroad bed as far as the grade is concerned?

Q- And did you not say the grade was uniform all the way down?

A- Apparently it is uniform.

It would be practicable for a railroad—small light grades.

Q- Well it is a uniform grade?

A- It is not uniform.

Q Well it is nearly so?

A It is nearly so when we look at a railroad bed.

Q Didn't you say that the current of a river was just the same?

A Apparently so

Q And didn't you say that the stones were graded both on the bank and on the channel?

A Graded.

Q From the head of Pickering's Bar down to Rice's bridge?

A I claim that they are graded, that is that they are coarse up in the upper end and get finer as they go down.

Q And that is perfectly regular both on the bars and in the bed of the river?

A I did not say that at all.

Q Where can you find these stones graded what ^{power} did

it? Answer

Q It was done by water.
A Yes Sir

Q Did you ever hear of
cobble stones travelling?

A Yes Sir I have

Q Where do they travel?

A Down stream when
there is a heavy body of
water after them

Q Do they travel next
the bed rock? A If they
are on the bed rock, of
course, but if they are
on the filling of tailings
they won't

Q Won't they work their
way down the tailings
and travel? A No Sir

Q Even under six feet
of tailings? A I noticed
that any material that
is brought down whether
it is coarse or fine don't
displace that that is
immediately under it
not in the channels.

Q Won't cobble stones

displace sand or small gravel? A Not to any extent

Q Well, won't they make their way to the bottom?

A No sir

Q And don't they travel on the bottom? A No sir

Q And in Civil Engineering is it not well understood that cobble stones will travel sometimes with six feet of material above them? A I never heard of anything of the kind

Q Are there not tables constructed showing the travel of water-worn stones?

A There may be from avalanches but not in water courses

Q But I mean from water courses?

A Well I never knew of cobbles or gravel under a bed of sand

Q You never heard of anything of that kind?

Ans sir

Q And you think that a cobble stone will remain on top of a bed of sand?

A They will to a certain extent; they never will displace sand to any extent

Q Where there is a current?

A It would make no difference in the current. If the force is settled under it, it will remain on top.

Q What is the minimum grade between Steven's bridge and the head of Pickering's Bar?

A I cannot give you the minimum grade, not correctly.

Q Do you find any place where there is a hump in the river?

A I do not, not in the bed of the river

Q Nor in the bed of the river? A No.

Q you do not find any place where the water is set back?

A I did not see any place of that kind

Q you do not find any place where there is any impediment in the channel?

A not when I was there there was not.

Redirect Examination

E. C. Allen

Mr Byrne Q when you spoke of a railroad grade what did you mean?

A well the Central Pacific Railroad Company have got grades 4 inches to the rod or nearly say 105 feet to the mile

Q 105 feet to the mile?

A yes sir, that is the maximum grade of the Central Pacific railroad

Mr leadwala A we object

to that as immaterial
Mr Byrne It is a matter
 that you called out.

The Court In speaking of
 the railroad grade

Mr Byrne O do you know
 anything about the grades
 of narrow gauge railroads?

A I do not ^{know} what grade
 they use in narrow gauge.
 I know some that Mr
 Toll has constructed that
 have grades of 7 inches to
 the rod

How much would that
 be to the mile?

A That would be about
 180 feet

O Is that greater than
 the grade from Rice's bridge
 to the head of Pickering's
 Bar? A Oh a great
 deal greater; there is
 no grade between these
 points on the bed of
 the river

Mr Caldwell I did
 not ask it in that sense

A that would exceed 2 inches to the rod

Mr Byrne I must disclaim the idea of knowing in what sense the gentleman asked the question

The Court I suppose the witness meant that it was an even bed, she did not mean steep or otherwise, but that it was regular

Mr Byrne I think you did in your former testimony give the grades of that river from your book? A I gave the grades from different points, that is I gave the grade from Pickering's bar to Warner's Bridge and from Warner's bridge to Stevens' bridge and from thence down to Rice's bridge, the three different sections but no intermediate section

Q That is all that we desire now. Did you

take any further grade,
any additional measurements
of grades?

A I did not calculate
any others, of course I
graded the whole distance

Q What whole distance?

A From Pickering's Bar to
Rice's bridge

Q And have you not already
given those grades?

A I have given those
grades in these three different
sections I spoke of
besides the one from
Rice's bridge up that
1780 odd feet

Q In reference to the
grade of the river from
the head of Pickering's Bar
to the mouth of Canon
Creek did you say any
thing?

A I never belled
that and I remember of
testifying something about
the grade between those
two points, that is, my
opinion of the grade,

That is all.

Q But you did not make any recent measurement? A No sir

Q Did you say that the water in that river would force the Gold Run tailings as far as Rice's bridge?

A I did not

Q Do you think it would?

A I do not

Q Where do the tailings from the Iowa Still or Independence Still mines come in with reference to Rice's bridge?

A They come down in the vicinity of Warner's bridge a little over a mile below Peckernig Bar

Q From where? Iowa Still? A From Iowa Still. That is very near midway between Rice's bridge and Cañon Creek.

Q Do these tailings come in within that 1780 feet

of which you have spoken?
 A They do not.

Q They come in below?
 A They come in above
Mr. Cadwalader Midway
 as I understand you?

A Midway yes sir
Mr. Byrne Will you
 state at what point?
 About how far above Rice's
 bridge they do come in?
 so that we may all under-
 stand it.

A About a mile and a
 half above Stevens's bridge.
 The ravine from Iowa
 Hill comes into the river.

Q What is the name
 of that ravine?

A The Jameson Ravine.
 Q How far above Rice's
 bridge? A It is about
 4 miles.

Q So that all the hills
 that come in from
 Iowa Hill passed over or
 remained upon this 1780
 feet above Rice's bridge?

A above Ricas' bridge,
above the 1700 feet above
Ricas' bridge

Q You were asked the
question as to whether the
grade regulates or controls
the velocity of the material
moving upon the bed of
a stream and I will ask
you to explain that

A I claim that the ve-
locity is the only basis
you can calculate the
moving power, not the
grade

Q How as the width of the
river anything to do with
that? A The wider the
river the thinner the
water, the greater the
surface ~~and~~ the thinner
the water and that
lessens the water power

Q And necessarily
lessens the velocity?

A Yes sir

Q How as to the width
of the river in that last

section of 1780 feet above
Rice's bridge?

A It is more than the
average width of the
whole section that I took

Q Now you stated that
the water does not rise
now as high as it formerly
did according to your
observation. Why does
it not?

A On the
account of the filling and
the width of the river
bed is more than double
what it originally was

Q The increase of the
original surface of the
river? A Yes sir

Mr. Caldwell There is
a matter that I want to
call the attention of
the Court to. We do not
want to keep Mr. Allen
and yet we want certain
information from him
in regard to the number of
hydraulic mines in

operation at Dutch Flat during the water season of 1880 - 81

Mr Byrne I do not think we have any objection to it if they desire it.

Mr Leach Walader Q You said in your memorandum that there are four, that was all at Dutch Flat

A Yes sir at Dutch Flat.

Q During the water season of 1880 - 81? A Yes sir.

Q You have named the Polar Star and you have got it "Nevada Bank of San Francisco" that is the Merchants Exchange Bank? A I did not know. I thought it was the Nevada Bank

Q The Merchants' Exchange Bank of San Francisco?

A Yes sir

Q How much water does that claim use?

A I think they used 1900 inches when they washed

last

Q Then the next is the Baker claim? A Yes sir

Q How much water does that claim use? A I do not know, I think somewhere about 1500 to 1800 inches when washing.

Q And then the Dutch Flat Canon claim? A That is cleaning the Canon but that is finished last Season. They washed that last Season and finished it.

Q Then the Lecamp claim? A That is a very small affair that did not use probably more than 200 or 300 inches of water once a week, surface washings almost.

Q Did the Southern Cross work any during the water Season of 1880-81? A No sir it did not

Q These were all the mines in operation at Dutch Flat? A Yes.

Q You know that do you?

A I think I do.

Q You were there all the time?

A Yes sir except when I was engaged Q The Baker claim was owned by whom? A Jno. P. Hickey

Q. Does he reside up there?
 A. No sir, he is there sometimes
 during this season they are
 washing

Q. Where does he reside?

A. I think in San Francisco

Q. And the Le Camp claim
 that is a small one? A. Yes sir

Q. Who runs that?

A. Mr. Le Camp himself, J. H.
 Le Camp

Mr. Byrne I understand you
 that the Camp claim is washed
 out? A. Yes sir

Q. Do you know what portion
 of the year the Le Camp claim
 runs, how many months of
 the year? A. I do not think
 he runs over 20 days in the year.

Q. Twenty days in the year

A. That is all.

Mr. Cadwalader Where is the
 Elmore Hill? A. The Elmore
 Hill is situated about a mile
 and a half east of Ditch
 Flat or North East

Q. On the same divide?

A. No sir, it is on the point

between Little Bear River and
Big Bear River

Q Was that run last year?

A. They washed in a small
Claim there last year - they
washed it out I believe, all
I know - In fact they washed
there and washed a little
Claim out and finished it

Q The Cedar Creek was not
running last year was it?

A That is the O'Keefe Claim,
that is the Cedar Creek

Q Which Claim the Baker?

A Yes sir the Baker. That
is one of the Cedar Creek
Claims

Q. What is the title of them?

A I do not know what
they call it now, I do
not know if it has got
any name particularly

Q. It is an English Corporation
is it not? A Not now

Q It used to be?

A It used to be, yes sir
Mr Byrne How long since
that property has belonged to

an English Corporation?
 A I think about two years. I
 am not certain

2. About two years?
 A I think so, yes Sir

2. To whom does it belong
 at the present time?
 A Mr Hickey

2 Who is Mr Hickey is he
 an English Corporation?
 A No Sir, he lives in San Fran-
 cisco, he has his home there,
 I believe

2 Do you know whether or
 not he is a citizen of the
 United States?
 A I am satisfied, he is

Mr Cadwalader We will admit
 he is

Mr Byrne Do you know
 where he was born?

9685 A I think he was born in

Illinois, in Galena, I think
so.

2 The home of General Grant?
A Yes sir

2 You feel satisfied that he is
an American Citizen?
A Yes sir

2 You are equally confident
that he is not a foreign cor-
poration?

A I know he is no foreign
corporation now

— " —

Recess until Tuesday.

January 18th/82 at 9.30 AM.

9751

In the Superior Court
of the State of California
in and for the County
of Sacramento

The People of the State
of California
vs.
The Gold Run Ditch
and Mining Company

Morning Session
Tuesday
January 10/82

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Winfield J. Davis
Official Reporter

In the Superior Court
of the State of California
in and for the County of
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The People of the State
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vs.

The Gold Run Ditch
and Mining Company

Tuesday
Jan'y 10/82
Morning
Session

Testimony
-of-
James H. Keown

By Mr. Byrnes, Q. Where do you reside?
A. At Michigan Bluffs at present.
Q. For how long a time have
you resided there?

A. I lived at Volcano Cañon, a
mile and a half from there,
for quite a number of years per-
haps four and I have been
down at Michigan Bluffs at a
little over a year.

Q. In what business have you
been engaged?

A Mining.

Q. With what mines have you been or are you connected?

A. With the Hazard Gravel Mine and at present I am superintendent of the Centennial Quartz Mine.

Q. Are you superintendent of that mine?

A. Yes, that particular one.

Q. When did you first come to California?

A. In 1849 July.

Q. When did you first come up Sacramento River?

A. I got in Sacramento here sometime in April 1850, early in April 1850; I can not say exactly, but early.

Q. How did you come up?

A. I came up in a scow.

Q. How long did your journey occupy from San Francisco - I presume you came from there?

A. The first one I think took something like ten days. I was afterwards 30 days coming up in the same way.

Q. 30 days on a single voyage from San Francisco here?

A. Yes, in a scow.

Q. When was that?

A. That was in the winter of 1850; we started in December, the 15th. of December 1850.

Q. State to the Court what opportunities you had for observing the condition of the river, at that time, between its mouth and the city of Sacramento, with reference to the existence of sand-bars or other obstructions to navigation.

A. Well, when I first arrived in Sacramento in the Spring of 1850 the whole country was under water with the exception of a couple of streets. The water was in here back in the sloughs and in the valley here and there you would see a little - what appeared to be a little island - a high little knoll and from this up, I think, I might safely say for 20 miles it was under water up as far as the mouth of the Feather river - as far up as I went at

that time — I mean on the Sacramento. The whole valley was under water up to Marysville, when I first went up; it was gradually decreasing in April, — gradually falling.

2. If you are proceeding to answer my question, go ahead?

A. In 1851, when I went up in a scow — I took up a scow with a load of lumber to Marysville. The winter of 1850 was very dry and it was somewhere about February when I got up to Bear River and I got on a snag there. I then pulled up the river from the mouth of Bear river to Marysville and I found a steamer high and dry on a sandbar with the watchman on board of her. I think it was the Fashion.

2. That is between here and Marysville. The point of which you now speak is between here and Marysville?

A. That point is between Bear River and the Hock farm on

the Feather river.

Q. Where with reference to the Town of Nicholand, if you know?

A. Well perhaps it was about two miles above the mouth of Bear river.

Q. You say you saw a steamer a strand?

A. I found a steamer lying high on a bar, where she lie all the winter until the following spring.

Q. What was the general condition then of the river between the mouth of the Feather river and the city of Marysville at that time with reference to its navigability?

A. Well in the winter time they had lots of water and the winter floods shifted the sand-bars and snags and made it very uncertain in summer: So much so that Mr. William R. Olden, who now lives at Anaheim and who was the ^{agent of} the ^{1 of the} Lamanché, the Braydon and other steamers, wrote an article on the improvement of navigation.

which I think was published in the Marysville Herald.

Q. When? A. In 1853.

Q. Describe the condition of the river above the mouth of the Feather river in regard to the existence of sandbars or other obstructions to navigation at low water?

A. At low water it was full of sandbars that shifted during high water and where you would find one one season, next season it would be above.

Q. You are not speaking of the Sacramento, you are speaking of the Feather are you not?

A. I say that during high water they would shift and the pilots had ~~up~~ to be very careful.

Q. Were there any other serious obstructions to navigation excepting the sandbars and if so, what, were they?

A. Snags.

Q. Describe them? A. Well, a sunken tree with the limbs sticking out.

Q. In the bed of the river?

A. In the bed of the river.

Q. How frequently were they?

A. In some places very thick and in others reaches pretty far apart. Where they got sheltered they settled.

Q. When did you last go up that stream?

A. I have been up that stream for a good many years. I can not verify to the last time. I think the last time I went up by steamer was in 1854.

Q. What do you know about the mines on the Forest Hill divide and in that section of the country which lies between the Middle and the North Fork of the American River?

A. I went to Iowa Hill 1854 and remained there until 1855.

Q. What have been your opportunities for observation in regard to the mines upon that divide — what we call the Forest Hill and Iowa Hill divide?

A. Well, I have had rather extensive opportunities for I lived there ~~and~~ four years and then went to Blue Cañon and was there a year and a half, and in 1872 I went to Michigan Bluffs and have been mining there since that time.

Q. To what extent did you travel over the country there for the purpose of observing the mines?

A. Not much for that purpose but a great deal for my own purposes.

Q. Did you travel a great deal through that section of the country?

A. Yes a good deal.

Q. I wish you would describe, to the Court, the extent of the mining in that section, their character and their past production?

A. That? — I am not competent to give statistics. I do not know anything about it.

9644 I have been attending to my

own business pretty much, but I can tell you about mines ~~and~~ that were going on in 1854 at Iowa Hill and from 1854 to 1858. The paying claims at that time were the Jamison, the Hazel Green and the Wisconsin and there was a great deal of prospecting outside of those and I think the North Star and the Sailor Union.

2. How extensively were those mines worked at that time and for how many years?

A. Well, during those four years there was an immense deal of tunneling going on further up.

2. Originally, where was hydraulic mining, as we usually understand it commenced on Iowa Hill and in that neighborhood?

A. I think I put up the first little hydraulic apparatus there in 1855 or 1856.

2. Describe to the Court how extensively that kind of mining

was carried on in that neighborhood from 1855 or 1856, say up to 1875?

A. I can not account for anything longer than 1859. I left there in 1859 — I left that neighborhood.

Q. Let us have that?

A. The hydraulic mining then was very limited.

Q. Very limited?

A. Yes. They had not commenced at Gold Run I think. They had not commenced scarcely. I am not positive about this matter though; I was not a hydraulic miner.

Q. To what extent has that kind of mining been prosecuted in the neighborhood of Forest Hill and on the other side of that ridge?

A. On the Middle Fork side perhaps there has been on three claims there and 150 acres washed away; that is, at Yodds Valley, at the Cardonelle and ^{at} the Big Run — Michigan Bluffs.

Q. Do you know anything about the production of those mines, the amount of money realized from them?

A. I have heard that the Dardanelles —

Mr. Hart, you say you have heard?

A. I have heard, yes.

~~Mr. Hart~~ I object to his stating what he has heard?

The Witness. I have heard from pretty reliable sources?

The Court Tell what you know yourself and not what you have heard unless you are asked especially.

Mr. Byrne Have you had any particular or special knowledge on that subject?

A. I have heard from what I consider reliable reliable sources that Todds Valley —

Mr. Hart I object to what he has heard.

The Court Do not tell what you have heard unless you are asked for it particularly.

Mr. Byrne. I think that this

is a matter that can properly be proven by general reputation. As a matter of fact no one - no one person has direct knowledge in regard to the production of the mines. It seems to me that a distinction should be drawn between testimony of this kind and what is usually called hearsay testimony. If this witness knows as a matter of general reputation, in the neighborhood and if his information is derived from reliable sources I think that he should be allowed to state it.

The Witness, I took some pains to collect data of the production of that channel.

Mr Byrne I was under the impression that he had investigated it to considerable extent.

I think a distinction should be drawn as I have said between this testimony and what is usually designated as hearsay testimony. This is in the nature of statistics which no

one man can produce upon any given subject purely from his own knowledge of the matter, but which any intelligent witness or at least some witnesses are capable of collecting and presenting in an intelligent form to the Court and in a reliable form. The Court, No rule of law occurs to me that will justify a relaxation in this respect.

Mr Byrne, How can we prove anything involving statistical matters and facts if we are to be confined exclusively to the knowledge of one individual The Court Matters of history or public interest probably do not require to be proved. Any compilation of statistics can be read for what they are worth. If they are matters wherein special training or experience can give one witness an advantage in estimating them over all others, probably then

it would be a matter of expert testimony. But I do not remember of any principal of law or rule of evidence that will justify hearsay testimony in such ~~an~~ a connection.

Mr. Byrnes I could ask the witness some questions to prove his knowledge, if the Court will permit me.

The Court. I do not know of any rule of evidence that will allow this testimony.

Ex. Mr. Byrnes We will take an exception to the ruling of the Court.

Mr. Byrnes, 2, Mr. Keown to what extent have you observed the natural washing away of the surface of the mountains and hills in that portion of the country?

A, The washing is very great; the natural washing is very great.

2, I wish you would describe to the Court just what it is and how it occurs?

A. There is an immense water-shed up there on that ridge and on the adjoining ridges and the heavy rains come and pluck away the ridges and when the country is cut up by cattle and sheep; and again the severe frosts of the winter of course slack the ground up and the next rain carries it down. The natural washing I consider is very great.

2. Describe the effects of the severe frosts upon the surface of those mountain sides?

A Well, in swelling up, the ground about the loose boulders when it thaws of course it runs down the hill some distance and the next heavy rain that occurs carries it still further down.

2. Do you know what the average rainfall is in that section of the country each winter?

A. I do not. It is very heavy in ~~some~~ winters and some

winters quite light. When it does come and a heavy winter, it is very heavy perhaps 60 inches in a wet winter.

Q. 60 inches of water in a single season?

A. In a single wet winter.

Q. You spoke of cattle and sheep, how extensive or how numerous are the herds of sheep and cattle that are pastured on these mountain sides during the latter part of each summer?

A. Well, last summer I went up quite close to the summit about to the head of Big Meadows on the middle Fork of the American River and it was full there of sheep and cattle up to Picayune Cañon leading up to Lake Tahoe. Every place, we went, we met with herds of cattle and sheep.

Q. On this side of the summit of the Sierras?

9702.

A. On this side of the summit.

2. What effect do they produce on the surface of the ground there?

A. The sheep cut it up very much climbing up the hillsides; they cut it up very much and so do the horses and cattle.

Can you give us some idea as to the number of thousands of sheep that you saw up there?

A. I can not; but up there every one has a place which he calls as range and they have an arrangement among themselves ~~and~~ that each man is to own a spring and on a certain range connected with the spring. Sometimes there are difficulties among them. They are thick enough to make difficulties at times.

I wish you would give the Court some idea as to the number, whether they are small or large bands of sheep.

A. The bands of sheep I saw at the Big Meadows I think

The owners told me there were
somewheres about 3000.

Q. In one band?

A. In one band.

Q. Was that an unusually
large band?

A. I am not prepared to speak
on that subject; I did not pay
much attention to it.

If you spoke something about
roads, can you give the Court
an idea about what number
of miles of road are upon that
ridge or between those two
rivers?

A There are
great many miles of roads
perhaps 400 - cross-roads, and
parallel roads and log roads
and roads leading to different
camps and trails, I suppose
400 miles. Safely I think I
can say 400 miles.

Q. How numerous are the
log roads; are those used for
lumber purposes - carrying
lumber?

A. As the timber gets scarce
it makes more roads and they

have to haul it further. I think there are three miles up there at the present time on that ridge, four that I know of.

Q. Upon what kind of wagons or vehicles are the logs transported to the mill?

A. ~~The~~ On very heavy trucks, the logs are brought in.

Q. What effect do they have upon the surface of the earth there?

A. They cut it up like heavy teams do on county roads and toll roads.

Q. How deep have you seen the dust on those roads in the fall of the year?

A. A foot at least.

Q. What becomes of that?

A. It is washed out by the ensuing rains.

Q. Describe to the Court how deep from the original surface of the earth you have noticed them cut down there?

A. I judge from one to four feet on that ridge; that is, taking it from Forest Hill

to the Baker divide — up to Mrs Bakes ranch.

Q. What is the character of the surface there?

A. Well, it varies; some places it is vegetable mould to some extent — but generally it is a red, clayey earth.

Q. Is it light or is it tough.

A. When the water gets in it, it makes it very tough mud.

Q. Does it, or does it not, wash with the rains and floods?

A. When the heavy rains come, it carries it into the ditches and it runs ^{down} with the grade of the ridge.

Q. Where does it go?

A. In the river.

Q. In what river?

A. The Middle Fork there. There are other roads there on the North Fork on the other side of the ridge.

Q. As compared with the amount of material washed from the hydraulic mines upon that

ridge ^{what} do you say as to the quantity that is washed from the streams from natural causes or from causes other than mining?
 A. I should say that the natural wash is very much larger up there than the mining wash from hydraulic mines.

Q Can you state how much larger in comparison?

A Well, I can draw an inference from ~~from~~ seeing the valley of the Sacramento filled up with the wash and the San Joaquin, and the alluvial soil, around the bays here.

Q Let us have your judgment on that point?
 A Well, I think I can safely say it is three times as great.

Q Three times as great as the wash from the mines?
 A Yes and it is carried much further down by the streams - more rapidly carried down by the streams.

Q You speak of that section of the country which lies between the Middle and the North Forks of the American River?
 A I am speak-

ing of that, yes, at present, but there are other ridges that are washed also.

2. You state that that material which is the result of natural washing comes much further down into the valley than that which is washed by mining? A Yes sir, it is lighter material.

2 How much lighter?

A Well, you see after a flood that the rivers are very muddy, the ditches are very muddy, the creeks are very muddy. Even in 1849 and 1850 the rivers were very muddy here after heavy rains. They get clean in the summer or after the heavy rains are over.

2 Now describe to the Court the quality of material which is washed from the mines in that section of the country as compared with what we call the natural washings?

A Well, portions of what are washed out of the mines are immense boulders, 2 or 3 tons in weight, and they of

course stay in the Ravine, where the grizzlies chrough them out, boulders of a formd weight to 300 weight and now they are down in the Canon and eventually down in the river and where there is a large discharge they gradually form bars across the river

Q What is the effect of these bars upon the material discharged into the stream above the point where they form?

A It holds it there to a great extent - holds it there

Q To what extent are these Canons now actually filled up in the manner which you describe?

A I have not been up in that region lately, although I live up there. I have been looking after my own work and have not been up to Blue Canon ^{creek} or up to Canon Creek ^{creek}, I have not been to Canon Creek since 1860.

2. How is that in the
Cannons and Ravines which
discharge from the Forest
the great stream of the Country?

A They are pretty clear,
pretty well worked there
away down the river. There
are men that work them
over again, they catch the
tarlings and work them
again and send them fur-
ther along.

2 How much further do
they go? A Well when
they strike the river the heavy
material generally stops
about where it lands.

2 And it is there now?

A It may gradually work
forward but slowly.

2 I intended to ask you
if you knew or if you ob-
served anything about a bar
which was near the mouth
of Steamboat Slough when
you came up the river in
1849 or 1850?

A Yes sir, I paid attention

to them then because I
could not help it.

I describe its condition
in 1850 when you first saw
it? a The Steamer
then The McKim, and other
Steamers were apt to get a-
ground in times of low water
after got aground.

How frequently?

A well, I can only
speak of general report when
I have been travelling, on
them. I have been on them
when they have got aground.

Is it not a fact that
in the summer season Steamers
could not cross that bar
at all excepting by the
aid of the tide from below
and that they waited over
on land up there at the
point now called Colling-
ville, below the bar, for
hours? a Yes Sir.

Waiting for the tide?

a Yes Sir.

How often have you

known that to occur?

A Well, not often. I have not been there you know Except coming up and down on these occasions as a general traveller on the river

Q I thought you travelled there frequently. What way that can be known as - what was it designated, what was it called?

A It is known as the Hays Bank

Q Do you know of any other can on the river between here and there?

A I do not recollect any that impeded navigation. I think that the Snags were the difficulty.

Q Were they numerous?

A I am not competent to state about that portion of the river, it was higher water when I came up there than higher up on the Peacton

Q What do you know about

the value of the mines, it
 water upon the Forest Hill
 divide? A About the value.

Q Yes, the present value?

A Well, it is a very depressed
 state of mining affairs
 at the present time. I have
 spent about \$150,000. There and
 I do not know what I could
 get for it I am sure.

Q Why is it depressed?

A I do not know, I am sure,
 The Comstock has mashed every
 thing up.

Q But I was asking you
 more particularly about these
 mines?

A Oh, I suppose
 these suits to a great degree
 affect the hydraulic mines,
 the value of them.

Q The existing litigation of them?

A Yes sir, and the threats
 for the future of stopping
 them.

Q I would like to have your
 knowledge of the intrinsic
 value of these mines sup-
 proving that there was no

litigation? a I think that they are very valuable. I think the Channel is the richest perhaps of any extent of it in the State, that is the drifting gravel channel, judging from what I have learned, which the Judge objects to my stating. The production has been from 1850 in a distance of 12 miles I think. I may safely place it at \$2,000,000 in that Channel, and a very limited portion of it worked.

2 How long is that?

A. That goes pretty well away up to the Summit with the ramification and different branches coming in similar to the present river system only covered up with cement.

2 Well you give its length 12 miles as nearly as you can? A So far as it is traced, so far as I know it to be traced

I should say 60 miles.

I saw wide as the Cham-
Nell, what is its breadth?

A. In places where there is
soft country rock where the
water had a chance to cut
it out it is wide and
when it strikes hard patches
of rock it crops the country
it narrows into gorges.

I can you give its aver-
age width in feet?

A well, there are places
where it is 60 feet wide
on the bed rock, and there
are other places it is
not 30 feet, not above 20
but then the water goes
up on the sides where it
is narrowed up like a
hoir turned on edge, it
is deeper where it is narrow.

I What is that deposit,
what causes it, the Channel?

Mr Hart I object to that
as irrelevant and immaterial,
and it is a mere matter of
speculation and science

and it is not competent-
The Court. I do not see why
 we need to investigate that
Mr Rynne Of the 60 miles
 of which you have spoken
 how much has been worked
 up to the present time?

A I do not think that
 there has been over 200 acres
 drifted out

I How much in length
 along the channel?

A Well, I can not state
 the length of it

I Could you state a mile,
 or has there been one mile?

A Yes sir, much more. I
 have drifted 2800 feet
 myself at the bottom of
 a 130 foot shaft

I Can you give us any
 idea in miles?

A I think the Damascus
 has drifted over a mile
 and the Hidden Treasure to
 meet them is perhaps $\frac{1}{2}$ a
 mile - I would rather not
 testify to it for I have not

taken pains to inform myself of it

Q. In your judgment how much gold remains in the Channel yet to be taken out?

A. In my judgment 200,000,000.

Q. Upon what do you base that opinion?

A. On what has been already worked and the length and extent of the Channel!

Q. And the production of what has been worked?

A. The production of what has been worked. There are thousands of acres on the bed rock of that dead river system in Cambridge.

Crop - Examination of.

James H. Keown

Mr. Hart. You say you went to Iowa Hill in 1854 and remained there until 1858? After that,

I was then any hydraulic

mining there during the time you were there?

A. I commenced a cable operation with the usual head of water, that they had then in use, 25 inches, myself in 1855 or 1856 on Independence Hill a mile from Iowa Hill.

Q. Well, was there any other hydraulic mining there up to that time?

A. I do not recollect any until I left there - Geo. Jameson was hydraulicking when I went then down to Iowa Hill.

Q. In 1854? A. Yes sir.

Q. From there you say you went to Michigan Bluffs?

A. From there I went to Blue Cañon.

Q. How long did you remain at Blue Cañon?

A. Pretty much of the time for two years.

Q. When did you go to Michigan Bluffs? A. In 1872.

I was there any considerable amount of hydraulic mining on the forks of the American River so far as you knew up to 1859? A No, I do not know of any considerable amount.

Q What was the general nature of mining there up to that time, that is the most extensive? A. Tunneling for drifting gravel, you know.

Q What is the difference between drifting and hydraulic mining up there?

A The difference between drifting is that by drifting you take out the breast of the bed-rock, 2 or 3 or 4 feet deep, or 5 feet deep, if the gravel is good pay to that height, or 6, that is sent up and washed through sluices.

Q And with hydraulic power you have open cuts or tunnels and turn the force of the water on to the face of the bank, and wash it down

Chat away? a Yes in 9785

Q When did hydraulic mining first commence between the North and Middle Forks, that is, on the Middle Fork near Forest Hill?

A That I am not prepared to state

Q Were they pursuing hydraulic mining at that time, at the time you went there?

A I knew of none but this little affair of my own and the Jameson.

Q You call Forest Hill, Iowa Hill? A The Iowa Hill ridge is on the same divide between the 2 rivers, but I had not been to Forest Hill at that time at all nor to Michigan Bluffs.

Q Did you whether or not there was any hydraulic mining in 1872 at Forest Hill?

A I do not know

Q Has there been any there since?

A At the Sandances below Forest Hill,

yes in

Q How far below?

A Perhaps two miles

Q What has been the nature of mining at Forest Hill?

A Principally drifting

Q Did you state that 300 acres had been washed off by hydraulic process at Forest Hill? A I stated that on the Middle Fork of the American River as far as I know of, about 150 acres has been washed off.

Q Didn't you state that 300 acres has been washed off?

A I did not say

Q How deep has that 150 acres been washed off?

A From a depth of 10 feet in front bar. to perhaps 150 feet as you get into the mountains.

Q What would be a fair average? A What is the average of that?

Q Yes sir? A That I can not pretend to tell you

Q Is there more of it that

is 100 feet deep than is 10
or is there more 10 feet than
100? A. I should say
there is more of it 100 feet
deep than 10 feet deep.

Q. So that the average would
be probably over 100 feet in
depth, wouldn't it?

A. The average would perhaps
be 80 feet.

Q. Two acres, 80 feet in depth?

A. I am speaking of the
Dardanelles that you just
alluded to. I am not
speaking of the Big Inland
other claims at other points.

Q. You are speaking of the
two acres? A. I am
speaking of the Dardanelles
that you led me up to a mo-
ment ago.

Q. How much has been wash-
ed off at the Dardanelles,
how many acres?

A. Perhaps 40, I do not
know. I am not an authority.
I have not measured those
places.

2 Well, where has the balance of this road been washed?

A At Todd's Valley and up at Michigan Bluffs.

2 How deep are the washings at Todd's Valley?

A There seems to be a pretty high bank, looking at it from a horse riding along the ridge. I could not tell you the depth of it.

2 What would be your estimate of the depth?

A Well, there has been so much ground washed out shallow, before I went there that I can not make an estimate.

2 What would be your estimate of the height of the banks where you say that there has been washings?

A. I would fancy they were from 120 feet to 150 feet now, with the overlying cement and all.

2 What would be your estimate of the number of acres

there? A 50 or 60 acres,
perhaps more.

I well, where was the other
place you mentioned?

A Michigan Bluffs, the Big
Tim claim.

I know much has been washed
off there? A. It is
scarcely fair to ask me to
give you an answer as to
how much for I have not
measured or taken pains
to inform myself. There is
quite a tract that has
been washed away, certainly
40 acres, anyhow, may be
more.

I have you been there at
any time when they were
actually washing.

A yes Sir, on 1 or 2 occasions.
I am say probably 40 acres,
may be more?

A I should say probably 40
acres at Michigan Bluffs,
perhaps more, because the
miners before the hydra-
licking worked up on the

min' to a great Extent there.

Q To what depth would
you put the washings there?

A. The outside was quite
shallow there and in the face
now I suppose it is a little
over 100 feet

Q. That is one pit is it, or
a number of pits?

A. It is in the hands of
one party now, but hun-
dreds of men worked on it
formerly

Q. But is it one pit, simply
one mining pit or is it di-
vided into several mining
pits?

A. There have
been formerly several mining
Companies worked in this pit
now open

Q But is it now one pit
or is it divided by walls?

A. Now it is one pit

Q When were you there to see
the work going on in any of
these mines?

A. I was
down at the Big Gun last
winter

2 Down where?

A Down at the Big Gun mine at Michigan Bluff last winter a portion of a day, an hour or two.

2 Were you ever there at any other time? A Some years ago I was down there one Sunday some four or five years ago.

2 How many years ago? Were you ever there more than twice?

A I have crossed the ground more than twice but not when they were working.

2 Were they working on it at the time when you saw them, at the time you were there on Sunday were they at work? A The men

were not there, but the owner was clearing out the cut.

2 If you have been there when they were actually at work twice, once last winter and once about 5 years ago on Sunday? A Yes.

2 When did you visit the

Other mines you have spoken
of here? At the Darda-
Keller, I was down there last
Summer

I How long were you there?
A A few hours

I Have you ever been there
more than once?

A Yes sir, I have been there
for 3 times twice certainly
I twice in how many years?
A Oh, in the last four
years

I Have you ever been there before
that? A No.

I Twice in four years you
have been there. Were they
at work both of those times?

A They were drifting, sending
in drifts but not at work
with the pipes at any time
I have been there.

I Have you never seen them
working by the hydraulic
process? A No, never

Saw any pipe in operation

I Did you make a com-
plete and critical examination

of the mine at that time?
 A I did not. I have seen
 the Wheeler and Bass Mine
 at Bath at work, I forgot
 to mention that, they only
 worked a couple of years

Q. State what Examination
 you made of the Dardanelle?
 A I did not go there for the
 purpose of examining it

Q Well, what Examination
 did you make if any?

A I chatted with the Super-
 intendent and looked at it
 and walked around but I
 did not go there for the pur-
 pose of making any Exam-
 ination

Q What did you look at?

A I looked at the claim
 looked at the bank where
 it had been piked off, and
 looked at the bed-rock where
 it was bare

Q How far up did you
 Examine the bank if you
 Examined it at all?

9728 A I do not understand. How

far up?

Q To what light on the side of the bank? A. As far as to look up at it, to the top.

Q Could you tell what the bank was from looking at it?

A Yes sir, I could see where it was gravel and where it was pipe clay, where it was overlaid with cement.

Q Where it was ~~raised~~?

A Where it was cement and where it was gravel, you could see the line dividing the gravel from the cement that overlaid it?

Q How far was it?

A The overlay is very deep on it.

Q Is not the cement on top?

A The overlay is very deep on the gravel.

Q How deep is the cement?

A That I can not tell you. 60 or 70 or 80 feet perhaps 100 feet in places.

Q Which, the cement is?

Ayer sir

Q At the point where you say it?

A Yes sir

Q And how deep was the overlay?

A The overlay

is the cement.

Q What do you mean by that? What is the underlay?

A Gravel

Q What do you mean by cement? (No referring)?

A Yes sir

Q Is that on top of these mounds?

A That is the kind of cement, but it has more wash and more rock in it, this has. This is cement here (No)

Q You say that the cement or the top stratum which they are working now is that divide is of that character?

A I do not

Q Well, what do you mean then by the overlay?

A I mean the blue cement

Q You call blue cement the overlay?

A Yes sir

Q You say that is 100 feet deep
 a In places 100 feet or over
 Q What is the average depth
 of it? A That I can
 not tell you. It gets deeper
 as you go back into the moun-
 tains.

Q What is the depth of it
 on the surface?

A I have not made any
 measurement.

Q You do not know?

A I do not know, but I
 know in places it is over
 100 feet deep.

Q What is the depth of the
 other, the softer material
 above, the upper stratum?

A The softer material, the
 earth, the vegetable moved
 up above?

Q Yes, and the upper stratum
 above that of cement?

A I can not pretend to tell
 you that, in some places 2
 or 3 feet and in some places
 10

Q Now don't you know, that

in that divide, as well
as in all the divides in
these mountains, there was at
least 100 feet above that
blue cement that is not
blue cement in any sense of
the term? A I have never
seen it

Q You have never seen it?

A No sir

Q Don't you know that there
is a very large portion of
the material above that
blue cement in the Danda-
kelly mine? A I do not

Q You don't? A No sir,
perhaps there may be 10 feet
or 20 feet

Q Have you ever seen the
Lowastill mine? A I have

Q Is there not 100 feet of that kind
of material (Robinson #2) in the Iowa
Hill mine above the blue cement?

A I have not examined the Iowa
Hill mine since they have been
hydraulicking to any extent
but I do not believe there
is 100 feet of that material

Q How much is there of that kind of material?

A I do not know

Q Above this blue cement?

A I do not know

Q Have you any idea?

A No.

Q When did you visit the other mines that you mentioned, 40 acres washed off, Todd's Valley is it not?

A I have been to Todd's Valley on various occasions on business of my own and I looked somewhat at it in passing or riding on horseback. I never went down on the ground at Todd's Valley.

Q You never examined the mine there?

A They have worked a great deal of ground on Todd's Valley that is not over 4 or 6 feet deep, acres of it.

Q How long since they have worked that?

a They are working it every year, they are working, this last year, this shallow ground or certainly the year previous. I think last year.

Q Now then how much ground has been worked on the other side of this ridge at Iowa Hill?

A I rode down past there about 6 weeks ago but I did not stop to measure it or form any estimate.

Q Well can you make any estimate? A Well I would rather not specify any amount.

Q Well is there over 300 acres there on the other side of the ridge?

A On the Independence Hill and Iowa hill side, do you mean?

A Yes sir

A I had rather not give an opinion - I do not think there is 300 acres

Q Well what do you think there are or there is?

A Well, no I made no measurement or estimate. I had rather not state

Q So you do not know how many acres, do you know how deep?

A I can form some opinion of the depth from having formerly run in tunnels there from 1854 to 1858

Q What depth is the washing there?

A Of course on the rim it is shallow and as you further into the hill it gets deeper

Q How deep? A Over 100 feet

Q The average depth?

A I do not say it will average that but when you get into the centre of the hill it will do that.

Q Is it not 175 feet there when you get into the centre?

Alvell that I do not know.

Q Well what did you pay was the average depth?

A The average depth of the ground washed off?

A Yes sir. A I am not prepared to compute it. I have made no estimates or measurements of it.

Q Do you know any other mines on that ridge besides the Iowa Still mines, the Forest Still mines, the Todd's Valley mines and the Dardanelles?

A Yes sir.

Q What are they?

A There are the Dardanelles and the Hidden Treasure prominent mines - the Hidden Treasure and the Damascus at Stumbug.

Q The Damascus is a drift mine is it not?

A The Damascus is a drift mine and so is the Hidden Treasure.

Q How many acres have

been mined out there?

A That I cannot say. They have mined for a long distance down stream, over a mile

Q What depth?

A Away underground probably 400 feet

Q They did not mine the top off?

A They did not mine the top off, they have taken out perhaps from 2 to 6 feet of gravel.

Q How many cubic yards have been taken from that?

A I do not know

Q Have you any idea?

A I have not.

Q Well, now then, the Hidden Treasure, what is that, a hydraulic mine or a drift mine?

A A drift mine.

Q How many feet of cubic yards have been taken from that, do you know?

A I do not, I have never been in the mine.

Q You do not know the depth? A I do not know the depth on the surface but I should judge not less than 400 feet where they are at present at work, from 400 to 600 feet

Q Are there any other mines on that ridge?

A Lots of mines

Q Do you know their depths generally and the amounts washed?

A I know the depth of the Hazard that I have worked myself

Q Do you know the depth of any others?

A I do not. I have not measured any

Q Do you know the number of acres washed in any of them? A I have stated that altogether I suppose 150 acres washed on that middle fork side

Q But do you know the

number of acres washed
by any particular mine?
A No from measurement,
no.

Q Do you know it so
that you can state it
generally? A I do not.

Q You cannot estimate
within 10 000 000 cubic
yards the amount washed
on that side of the ridge?

A I do not wish to make
any estimate at all.

Q I know, but could you
do it? A I could not.

Q You could not estimate
within 10,000,000 cubic yards
how near?

A No to
verify it. I may have my
own opinion but I do not
come here under oath to
state it.

Q How near would you
be willing to swear that
you could come to a
correct estimate of the
cubic yards taken from
that side hill?

A Without making measurements and investigations I do not wish to make any statements.

Q You would not make any. A I do not want to make any statements of that sort.

Q If you do not know how many cubic yards have been washed from that hill within the last few years, how can you compare the number of cubic yards washed from that hill by means of mining with the amount of natural wash?

A I do not pretend to compare the cubic yards. I do not suppose that you know how many cubic yards are in the Sacramento Valley filled up here or in the San Joaquin?

Q No sir and I do not claim to know. I would

not undertake to make any comparison

A Well I am just in a similar position about the other

Q I understood you in your examination to say there is three times as much natural wash as is washed from the mines on the ridge?

A That is my impression, that is my belief

Q But you have no facts upon which to make an estimate?

A No measurements to make an estimate

Q And no facts?

A No facts except the immense results that I see.

Q Down here? A Down here and up there.

Q Well what effects?

A Land slides

Q You saw the results and you presumed they came from natural wash?

A I consider the sedimentary

formation here is all
natural wash

Q You assume that to
be true without investigation?

A I have investigated
so far as anybody can
investigate it

Q To what extent have
you investigated it? And
what facts have you
learned by your investigation?

A I have seen in 1850
where I lived on a ranch
near Marysville in 1850
and 1851, the Spring of
1851 a flood came down
there and we supposed
we were all safe at
night and we were cut
off from Marysville by
a mile of water in
the morning, and when
that water subsided
on the ranch there were
some four acres of sand
landed on it from 1 to 2
feet deep and on the next
ranch the Quincy ranch

There was about 2 acres
cut away

Q Don't you know they
were mining by drifting
process at that time
all through the mountains?

A I do not

Q Until that flood came?

A I do not know that
they were mining by drift-
ing process anywhere in
1850 and 1851

Q Were they or not?

A They were not to my
knowledge

Q How were they mining?

A With rockers and
Long Toms. They had scarcely
started with sluices

Q Mining at that time
was more extensive in
California than it has
ever been since?

A So far as rockers and
that sort of thing went.

Q Well there were ten
men on it then where
there is one now?

Wyes sir I believe that there was

more than that 20 or 30 or 40 to one?

Ans sir I do not think there was as many as that but I think there were 10

Q There were more than 20 times as many in El Dorado County?

A I do not know I never lived in El Dorado County

Q So that that is the basis of your judgment?

A That is the facts that lead to a judgment not the basis of it

Q Have you ever investigated by actual inspection the character of material in the mines at Iowa Hill after it has been pulverized and reduced so as to take the gold from it?

Wyes sir I have examined the tailings

Q I mean in the mine?

a I have seen the state
of the mine and
looked at it when mining
in it

Q Have you seen it after
it has been pulverized for
instance?

A I have
seen the tailings. I have
never seen it pulverized
with a mill but I have
seen the tailings after
washing through the sluices

Q You have seen what
comes out into the river?

Yes sir

Q But you have not seen
what has been pulverized
to sand?

A I do not
understand you. How would
it be pulverized unless it is
pulverized at the mill
or through the process of
washing it through sluices?

Q It is done in that way
I understand, but tell that
you saw is the heavy material
that is left?

A That is what is in the

river now

Q That is what you saw?

A Yes sir

Q So that you made no estimate as to the lighter material that has gone on down?

A You see the sedimentary formation that is pulverized by the action of boulders and water going through the sluices

Where do you see it?

A It has got into the river, and come down to some extent.

Where do you see it now?

A I have not been looking for it lately?

Q You have not seen it there lately have you?

A No sir, I have not been looking for it

Q How can you state by looking at the tailings in the river what amount has come down the river?

A How can I tell? By peeling the tailings, what amount has come down

I judge by the tailings in the river.

Q You estimate in that way? A I estimate that the tailings in the river have filled it up and there is that amount of tailings in it.

Q But how do you know how much has come down?

A I do not pretend to say I know.

Q If you do not know in any way by comparison, by any kind of investigation how much has come down from those mines how is it that you can come here, and, as an expert witness, make an estimate?

A I do not come here as an expert witness.

Q Make a statement for the purpose of controlling the judgment of the Court as to the comparative amount of the material coming from the deposits of the

miners and the amount that comes from the natural wash. What is the basis of your observation that makes you peculiarly fitted to testify on that subject? A long experience in these mountains, observation and thought. I do not come here as an expert witness.

Q As an expert; how do you not claim to be an expert?

A I do not, not in this matter of hydraulicking I do not at all.

Q You do not claim to be an expert as to the amount of material that is wasted down from the mines? What I claim to know is what I have seen in those mountains and I claim that I have been crossing the Auburn bridge for the last nine years and I can see no perceptible alteration in the amount

of tailings in the river there at the junction. I claim that I crossed Rice's bridge some six weeks ago and was astonished to find so little tailings there.

Q At Rice's bridge?

A Yes sir. I went back by the suspension bridge on the trail from Illinois down to Iowa Hill and saw considerable tailings there but I do not claim to measure in cubic yards or any other yards.

Q This is your belief and not your judgment?

A This is my judgment and belief that comes from thought about the matter? Do your belief in any way warped do you think by your interest in the matter here? A I am not hydraulic King at all.

Q You feel a very severe interest in the case of course, I understand?

Q I feel that the Prosecution is a very unjust one, it militates against an industry that has done a great deal for the State and for the Union and for the world.

Q You have a feeling in the matter? A I have to that extent that I think it is a very unjust prosecution.

Q Of course your judgment to that extent is warped by your feeling in the matter? A No I think not.

Q That is your belief as I understand upon which you have no facts to base?

A I have stated a great many facts to you which you ignore and you try to pull me up with things that I do not pretend to know, where I have made no measurements.

Q I do not remember any facts that you have stated and I do not ignore anything

that you state in any sense.
 I do not remember any fact
 that you have stated, where
 was it you said the road
 was washed from 1 to 4
 feet in depth?

A Iron Forest still up to
 the Baker ranch, nearly
 up to the Baker ranch.

Q How far is that?

A about $3\frac{1}{2}$ miles perhaps

Q How wide is that road
 washed to that extent?

A 12 or 14 feet at the top
 and narrower at the bottom
 where the deepest wash is.

Q Do you know of any
 other place? A well
 through the mountains the
 roads are washed where
 there is any considerable
 traffic on it

Q Well is there any other
 place where you know of
 the road being washed to
 that extent? A I do not
 know any other place
 near as deep as it is there

but I know plenty of places
where it is one to two feet
Owell where is that?

Along any of the roads on
the ridge there.

Q All of them? A Pretty
much all of them

Q How many miles of road
do you say is washed from
one to two feet deep?

Along that ridge?

A Yes sir. A well per-
haps 200 miles

Q 200 miles? A Yes sir

Q 14 feet wide? A At
the top from one bank to
the other

Q Is ^{this} one to two feet of
wash in the wagon tracks
or all along the road?

A The wagon tracks on
the road. The wagon tracks
are not 14 feet wide but
the bank falling in and
washing down has made
them wider at the top
of the bank

Q So that to that extent

you say that there is a place in all those roads that is 14 feet wide at least?

A I did not say "at least".

Q And a foot deep that has been washed out, a sort of gutter?

A Not in all the roads, no.

Q Well what is your estimate? A 10 or 12 feet wide

Q How can you tell that there is from one to two feet deep washed out of those roads? A By seeing the banks higher than the heads of the roads

Q Which banks, the outside banks along the grade? A Yes, the original surface of the ground that the road was made on

Q Now do you know of any place where the outside of the grade was that deep - most of those roads are graded roads along the sides of the

mountains?

A The most of the roads are on the summits of the mountains and follow up the level place on the Summit on top of the mountains. Of course there are side roads that go down the hill and go into valleys and go into ravines and wood roads

Q How long has it taken these roads to wash to that depth? A I should say that the road I speak of the deepest road has been in use for 30 years

Q And the balance of them have been in use for 20 or 30 years haven't they?

A A great many of them have been in use - the later roads, the logging roads have been a few years only, some of them 10 years and some fifteen and some of them only a

year. The Sugar Pine Mill Company when I passed there a year ago were making a road then.

Q Those new roads in use a year are not washed out to the depth of one or two feet either, are they?

A No; they are washed out to some extent after the first rain, to a considerable extent.

Q Now have you ever taken any measurement or observation with a view of determining exactly how many inches of the surface of those mountains within that drainage area have been washed out?

A I have not.

Q Could you state that one inch had been washed off? A In the last 30 years?

O Yes sir. A Yes sir. I think I could safely state that

Q That would be but a matter of opinion would it not?

A Simply a matter of opinion, but I believe there has been that much washed off.

Q You say the water does wash that kind of soil?

A It is my opinion that in 30 years it would wash at least an inch of the top and more.

Q That would be your opinion? Ayes is more than an inch.

Q Now do sheep eat up the ground or do they track it up and make it harder?

A Well if you look at them you will see a good deal of dust in the summer behind them and their feet tramp it up.

Q Perhaps that dust is the fertilizer that they speak of here, is that the natural soil or something else that you see there?

the manure from the sheep?
 A Well I have not devoted
 my attention to sheep or
 to what fertilizer they propa-
 gate

Q You do not know?
 A I do not.

Q
 Q You do not know whether
 or not they cut the soil
 A I do know they cut out
 the soil

Q To what depth do
 they cut it up?
 A I could not tell you

Q If they were kept in
 the corral they could
 cut it to a considerable
 depth and make a
 good deal of dust?
 A Yes sir

Q But roaming at large
 over the mountains can
 you notice where sheep

have been? Oyes sir

Q How do you notice it? Oyes see their traces of their feet where they have trampled everything down

Q Do cattle cut up the mountains?

Oyes sir especially in soft weather - at all times

Q They do not make dust to be washed away do they?

A I think so.

Q In soft weather?

A Not in soft weather they made mud to be washed away in soft weather

Q Well what weather was it you said they cut up the mountains? A I say they cut up the ground to some extent at all times soft or dry weather.

Q. How many cattle are there in these mountains?

A. I do not know

Q. Is there more than one band of cattle, at there every year?

A. Yes various bands

Q. Is that a great pasturing country at there?

A. Yes, it is all filled every summer. They are pasturing I should say from the junction to the summit.

Q. Where do Big Meadows drain to?

A. All that?

Q. Where is the drain of Big Meadows, where to?

A. It goes down the river down the Middle Fork of the American

Q. How does it come?

A. Down the river

Q. Is Big Meadows located on the banks of the river?

A. Big Meadows is located at pretty well to the head waters of the Middle Fork.

Q. What is the natural wash composed of - finely

of soil? a The Natural
crash of what do you
mean?

Q What is it composed of, only
of soil? A. And Rocks —
loose rocks

Q There are a great many
loose rocks in these moun-
tains? A In places, yes.

Q And where there are
loose rocks, and heavy snow
shades and heavy rains, the
rocks roll down the mountain
sides into the streams?

A Very much so

Q Some of the boulders that
have rolled down are as
large as any that come from
the mines, are they not?

A I have not observed
them as large as that

Q Have you not observed
very large boulders coming
down the mountain sides?

A I have seen them down
there, but I never saw them
rolling down

Q How large?

Q. At the bottom of the
Cannon I have seen them weigh-
ing from a ton to 40 tons

Q. What agency brought them
down there? A. They have
naturally been brought down
from natural causes

Q. I understood you to say
that the river at Forest
Hill is pretty clear of debris.

A. I say that in passing some
6 weeks ago that I was
astonished to find that there
was so little in it after
hearing so much talk

Q. You saw little debris in
the river? A. I saw little
debris in the river

Q. Most of it had gone away.

A. I could see the bed rock
down below the bridge very
similar to what it was
20 years ago, but above it
it commenced to accumulate
very fast

Q. What Rice's bridge did you
speak of a few moments
ago? A. I spoke of

Mr Rice's Bridge at Mineral
Bar

Q On the North Fork?

A On the North Fork.

Q I am say you were aston-
ished to find how little there
was there? A Yes.

Q How deep were the tail-
ups at Rice's bridge?

A I did not measure them
but I could see the bedrock
in the bed, as it used to be.

Q Where could you see the
bed rock? A Down be-
low the bridge.

Q In the bottom of the
stream? A No sir, not
in the bottom of the stream
for you never could see the
bottom of stream.

Q You never could see the
bottom of the stream?

A No sir, these rivers always
held from 10 to 20 feet of
gravel and boulders there
from the early days of Cal-
ifornia mining. In places
there were riffles and bars

at the river and it was shallow, but the gravel and boulders were always deep.

Q How long had it been since you had seen the bed of the stream at Rice's bridge?

A You mean the original gravel deposits.

Q Yes, whatever you saw there?

A. I suppose about 1858 was the last I saw that there were no tailings there. I crossed there about 6 years ago and it looked very much as it does now.

Q Very much like it is now?

A Yes.

Q How far down the stream was it that you saw this bed-rock?

A Perhaps

300 or 400 yards.

Q Down below Rice's bridge?

A Yes, below the bridge. I could see the bed-rock cropping out on the sides of the river where it had formerly been washed, and is washed

now by the heavy rain
and the water

Re-direct Examination of James Ot. Keown

Mr. Byrne Will you describe
in regard to what is common-
ly called lava or mountain
Cement? A Well, there
are 2 kinds of lava. There
is a lava in the Alta
region that I should say
come from an igneous source.
The blue cement is from a
water source.

Q What is the character of
the overlying stratum of
which you have spoken on
the Forest Hill divide?

A Water.

Q That is a sedimentary deposit?

A Sedimentary, yes.

Q Resembling that specimen
which is now before you?

A No, it is much finer
than these washed round

Coulder then this is?

2 Is it auriferous?

A No sir, not to my knowledge. I have tried it repeatedly and I never found anything of that sort. There is a portion that looks like you could find silver in it, but I fail to find any of that in there.

2 Is that they call Morn-tani cement or lava?

A No sir, that is not known as lava. There is lava that overlies these old dead rivers but it has a different appearance. This is blue cement. I suppose Lake Tahoe was the origin of all of them. It was speared out there.

2 The auriferous deposit is the lower portion.

A. It was the gravel that was originally in the bed of the stream before it was covered by this cement.

— " —

Testimony of E. W. Evans.

Called for deft.

Sewon

Mr. Debbles When do you reside?
a. I reside in
Placerville, El Dorado County,
California.

2 When did you come to
California?
a. I came
to California on the 1st of
October. 1849

2 When were you first in
Sacramento City?

a. I was in Sacramento City
on the 19th of October 1849.
I was here but a few days
though. I came down here
to get some grub and I saw
right bank. I was not
here but a few days then
and I was not in Sacra-
mento City again until
after the water subsided,
some time I think in June
I think it was in June

Devan engaged in mining at old Wehastown on Weber Creek that winter. I mined on the Middle Fork of the American River in 1850, 1851 and 1852 in the summer and in the winter I prospected that is, what we called prospecting then. We would go and find a mine and work it may be a month, so long as it paid to suit us, and then we would go somewhere else.

Q What kind of mining was it? A It was surface mining. They had worked on the bar. Some work had been done on the bar of the stream and on the bench of the stream and on the bank. And some places they would mine on the flats and ravines, any place where they could get a prospect easy. In those days they did not resort to deep diggings. It is all what we

armed call surface mining,
Shallow mining

I In the years 1850 and 1851
did you have occasion to see
the South Fork of the Amer-
ican River and the Middle Fork?
A yes I did, I worked on them
I What was the condition of
the water? A well, In 1850,
the water in the South Fork
up here from what is now
called Chili Bar - The first
mining was done about Colo-
mar, and it was always as
a matter of course very
foul the working, and on
the Middle Fork of the Amer-
ican River the water was
clear - I mined at Kelsey
Bar, that is south of
Todd's Valley. It is on the
Placer side of the river,
and there when I first went,
I first went there in Nov-
ember, we had a rain in
1849, and I went to locate
a ^{river} mine and at first, the
water was comparatively

clean but whenever it stormed
the water would get dirty in
all these rivers, and in the
North Fork it was the same
way that winter, but it was
what would be called clean
water until they got to mining
and then it would be clean all
most in the evenings. And
Especially when the warm
weather set in then the river
would become dirty, but still
it was what would be called
a clean stream.

2 State the number of miners,
factors engaged in mining on
the Forks of the American
in those years?

a. What years?

2. 1850 and 1857?

a. Well, there were any
amount of men working on
those streams. There were
20,000 men working, anyhow,
in 1850 and 1857

2 On which forks?

a. On the 2 forks, I mean.

On the Middle and South Fork.

I was not so much acquainted with the North Fork as I was on the Middle and South Forks.

I What became of the material removed in the river by these 20000 men in those two forks? A That was dumped into the stream. That was the way. They worked with cradles ^{all} ~~on~~ their bar and bench mining was worked with cradles and they dump right in to the edge of the stream. When we turned the river it was very light work. I used - I worked some Georgians. In 1850 we took out some troughs like Georgia troughs. And we used - well they might be called Shucis perhaps, - what we would now term Shucis. In 1851 we used sawed lumber. I think the lumber I used in 1851 was sawed near Todds Valley.

9770 We got out our own lumber

but we used sawed lumber
in 1851. John Hancock and
myself I think it was sawed
it with a whipsaw and in 1852
I flumed the river right
below Kelsey Bar at a place
called Louse Bar then. That
is in El Dorado County.

We lived in El Dorado County
on that side of the river and
we put in a flume there I
think three quarters of a mile
in length. We got our lumber
sawed up there and in 1852
we did not get into the
River until sometime in
September. The River was
high, that is it would be
high at periods. As the snow
would melt it would
run up and then it would
run down but I think
we worked until the
raze came and washed
me out in 1852, about
the 20th or 27th of October
and I gave up River min-
ing then and I went and

built a toll road. It is now called Morrills Bridge in El Dorado County.

Mr. Leachman. Where is that?
A - Morrill Bridge is between Diamond Springs and the town of Placerville. But I have been interested in mining ever since. I have never been out of it.

Mr. Dibble - When you commenced mining in the river, and others commenced mining in the River in 1850 what was the average depth of the gravel in the bed of the river?

A. Of the gravel mined?

Q. The gravel in the bed of the River?

A. In the bed of the River?

Q. Yes? A. Well where I worked it ran from a foot to ten or twelve feet. We generally in mining in those early days wanted to get on a riffle. For instance there would be a big hole and

we would want to get at the riffle where the gravel would be the shallowest.

Q- Average the depth of the gravel in the Middle and South Forks of the American River so far as your observation goes in the year 1850?

A- The average depth of the gravel in the two places where I worked in 1850 would be about five feet in the river.

Q- Describe the character of that gravel that you found ^{five feet} in that River at that time?

A- Well it was composed of what was called boulders gravel and sand. At the place where I worked it was not cement. It was soft, so that we could move it easily. We did not have to pick it up, dig it up.

Q- State whether that gravel that you found then in the rivers contained

a very large percent of sand?

A - In the Rivers?

L - Yes, in the beds of the Rivers.

A - Yes, in the place we worked there was more sand than there was rock.

L - State to what extent you found in passing up the Middle Fork and the North Fork in the banks of the Rivers sand and gravel in 1850!

A - Well in the river bars were formed along. I could describe where I worked in Selser's Bar. The bottom of it next to the bed-rock was hard and yellow. There were not so many big rocks in the bottom stratum. The next stratum on top of that was composed of gravel and sand and boulders and then right on top of the bar it was composed of what we call nigger-head boulders, very hard and round. They were not round exactly but they were smooth boulders and

then ~~under~~ this was a greysand
 There is where the gold was
 on Helseys Bar, so that it
 constitutes a kind of -
 2 { Inty } State whether the
 gravel and sand that you
 found in the bed of the River
 was a natural deposit or a
 deposit from mining?

A. It was a natural deposit
 undoubtedly.

2. How do you know it was
 a natural deposit and a
 deposit not made by mining?

A. Because there was no
 mining done on this portion
 that I am talking about
 that I mined but afterwards
 the whole thing changed
 there - I do not know at
 Helseys but I know at
 Coloma Bar is covered up
 now with mining deposits

2. What became of the
 natural sand and gravel so
 deep in the beds of the rivers
 with reference to the floods of
 1861/2? I what became of it.

Q Yes? A Well the big portion of it went into the river when it was moved

Q In the mining of it, it was thrown ahead?

A When they mined it?

Q Yes?

A Yes.

Q Now with reference to the flood of 1861/2 where was it carried? A Well, it was carried down stream I suppose

Q Is it a fact that by the flood of 1862, the displacements by the 2000 miners in the river, the floods carried it down? A Yes

Q What with reference to the claims below was the effect of the flood?

A The claims below?

Q Yes. A They were covered up

Q Why are they covered up?

A They were covered up in 1861-2?

Q In 1861/2 yes? A That was the year of high water

and everything that was move-
able was moved that year.

2. Whilst there was mining
at the river in 1851-2-3 when
~~across the material~~, the
natural sand and gravel off
the river carried and deposited
with reference to the lower
claim on the river?

A well, it was carried on
those bars and deposited on
those bars

2. Deposited with reference
to the lower claim? A Yes
I was it? A Yes

2 Deposited in the lower
claim? A Yes, as a
matter of course, it was.

2 What kind of mining
has been done in Eldorado
County since the floods of
1861/2? A Well, there
is all kinds of mining
done there. There has been
hydraulic mining, quartz
mining, seam mining, drift
mining, and the principal
part of the shallow mines

have all been worked.

2 Compare the mining displacement as to extent before 1862 to that which has taken place since 1862 and state the result? A coal, the displacement before 1862 was a great deal greater both in the amount of men working and the character of the ground displaced. The ground that was now working now, since then, is of a different character. It is what we call the Channel diggings and it is in the big draulie mines. It is all heavy material. Before that it was surface material that was mined. There was more other earth moved prior to that, to 1862, so times over, more than there has been since.

2 You would say so times more than it has been since 1862 - prior to 1862, than there has been since 1862?

Whip because it 50 times more
than it has been since 1862 -
prior to 1862 than it has
been since 1862?

A Because the material
was different. The mines
were different. Gold was
found in the grass roots in
those days and you do not
find it so now. They
mined the easiest portion in
the first settlement of the
Country. They prospected those
mines and in prospecting they
hardly ever sunk deep holes.
For instance at Todd's Valley.
Where the Dardanelles and
all the other deep mines are,
John M. Miner and I were
partners there, and we sunk
a hole in Todd's Valley and
we got down maybe 80 feet,
and we considered that we
were doing a big business.
The miners came to the
easiest working place and
where the bars were deep
they would not work.

them then. They come
work the tops of them and
then they come get into the
bank and they prospected
in the loose red stuff and
if it paid they worked it,
and afterward they went
up on the benches, but in
the first few years the
mines worked entirely in
the smooth easy going ground
and then afterward drifting
commenced. The first drifting
that I got into was in
Coun Hollow where the
Cabeir mine proper is now
and that was in 1853.

In 1853 they started in
pretty well drifting and
afterward I think in 1854
over the first big drainie
mine that I remember of
seeing. They then began to
hydraulic and they have
been at it ever since.

So that there is more ma-
terial actually moved in
the first 2 or 3 years than

I think there has
been since.
There has been more
material moved here
in mining, in about
three years - I am
speaking of the portion
of the country I live
in - There has been
more material moved
in three years than
there ever has been
since. That is my
judgment of it and
that is the reason I
form my judgment
in that way.

Q Give me simple facts, the illustration of these facts my learned brother will call out?

The Witness What?

Q Give me simple facts, the illustration of these facts my learned brother will call out. State what you know about the gold production of the South fork of the American river and in El Dorado County?

A I have a judgment of the amount that has been taken out. About \$50 000 000 is the estimate I would place on it.

Q Estimate the amount of gold remaining to be taken out and state the amount?

Mr Badwalades He object to that. He is not an expert.

Mr Dibble How long have you been engaged in El Dorado County and on

the rivers? Always since
I have been in the country
I have been engaged in
mining.

Q Are you acquainted with
them have you been ac-
quainted with the character
of the gravel and its
production during those
years? A Yes! Understand
me. I have been engaged
in mining, interested in
mining. I worked as a
man in the mines and I
did nothing else for three
years at first when I bought
a toll bridge with my
partner. I worked in the
mines about half the time
during those years, and
in 1860 I engaged in mining
personally. All the time
that I owned the bridge I
was interested in mining
I pretend to be a pretty
good miner and I have
been a careful observer
of mines. I have had a

pretty good chance to know
the amount of money that
came out. I could not
say accurately what came
out but I could form an
estimate. I have talked
with miners and I have
bought gold dust and I
have sold it and I have
mined and seen gold
dust a great deal of it.
I have talked to men who
are interested in the mines
around there and that is
the way I formed my
judgment in relation to
what came out and I
pretend to be a pretty good
miner. No man can
stand on the top of the
ground and tell what is
going to come out of it,
but I think that taking
what ground is unworked
there I can form an
estimate pretty closely as
to what will come out. I
can form my judgment

and that is how I know about it.

Q Have you examined the character of the gravel that is to be mined out and do you know the production of it in gold?

A Yes

Q Do you know the character of the gravel remaining in regard to its contents? A I pretend to know

Q State the amount remaining in gold to be taken out of those channels in El Dorado County and in the watershed of the South fork? A You want me to state what I think is remaining?

A Yes. Well I think there is mining -

McLeodw alader He is to confine this to the watershed of the South fork. A That constitutes a large body of the County

Mr Dibble In El Dorado County and in the watershed of the El Dorado side of the South fork?

A I think there is about three fourths of the gold in there yet

The Court Of the gold that is still in there?

Alges. If one fourth has been taken out there are three fourths of the gold still to be taken out

Mr Dibble What figure will that be?

Awell I will put it at 150,000,000 of dollars that would be taken out in El Dorado County alone

Mr Cadwalader He has not answered the question yet.

Mr Dibble He has answered it to my satisfaction. State if you know the length of the mining ditches and the capacity of the mining reservoirs of El Dorado County?

Alves I know them.

Q Give them?

Alvell -

Qunt's > First the ditches
a the first ditch is the
Park Canal. The Park
Canal I could not give
you the exact length of it.
I know the principal
ditches. I could not give you
the exact number of inches
that these ditches will
carry.

Q I do not care about
going into the particular
ditches but simply the
entire length of all the
ditches and the opposite
Counsel will draw out the
other facts.

a Say 800 miles of
ditches in length.

Q 800 miles? Alves.

Q What is the size and
capacity of the reservoirs,
storage reservoirs in
El Dorado County, put
it in miles, the length

in miles and width?

A I do not believe I could, Judge, I do not believe I could put it in miles so that you would understand it. There are about 2000 acres, there are 2000 acres I think in the two reservoirs that belong to the El Dorado Water and Deep gravel Mining Company at Echo Lake and Silver Lake. I think they contain 2000 acres. Loon Lake I do not know exactly what its contents are but I saw it once and it is a mammoth work and I thought it was in extent greater than Silver Lake. Park Canal has no reservoir at the head. There is a small little dam which turns the water in there and they take the water from that and then the balance of the ditches in El Dorado.

County have no reservoirs up where they impound the water to hold it. but they all have after they get down in mining regions have reservoirs all of them have reservoirs and there is an immense number of them and I could not say how much water it would hold because there are hundreds of them and I could not say how much water it would hold but all of them have reservoirs, but these others have at their head where they impound the water, large reservoirs to hold it before it was turned into the mining canal. All of them have reservoirs except the Park.

Q Average the depth of those reservoirs, the whole of them? A The whole of them?

Mr. Caldwell One on top

of the other

and I will not do that,
but I will give you the
depth

Mr Dibble Q Average the
depth A I will average
the depth of those reservoirs
by the amount they take
out. Silver Creek takes out
20 feet. It is 20 feet above
her gate, 7 feet at the Echo,
and it is 10 feet at Noon
Creek but I think they
have put on an addition
this Fall an abutment,
It is a mammoth piece of
work but I do not know
how large it is

Q For what purpose were
these reservoirs and ditches
constructed? A For mining

Q When were they com-
menced? A The first
ditch dug in that County
was commenced in 1851

Q From what sources do
these reservoirs receive
their storage water?

Q The upper reservoirs receive it from the snow shed up there and the tributaries which run into it, in the streams and the lower reservoirs receive it from the Canals but where they store it in the upper end it is all caught in from the snow sheds

Q Are the sources snow and Springs? Ayes.

Q If the water had not been stored in those reservoirs what would have become of it with reference to the seasons of the year?

Alvill if they did not store it in the winter as a matter of course it would come down the rivers when they turn it out it comes down here the balance of it

Mr. Starr we propose to admit that if the water was not stored it would come

down the stream so that
 you need not put any
 more witnesses on ^{the stand} on that
 subject

Mr. Dibble Q When the water
 is so stored in these reservoirs
 when does it discharge in
 to the rivers?

A Some seasons it is later
 but generally along the dry
 months in July, August, Sept
 ember until the last came
 this year I think it was
 in August, before we
 turned in the El Dorado
 Canal

Q When is it utilized from
 these Reservoirs for mining
 purposes

A I say in the summer
 when the streams get low
 They turn in out then into
 those Canals and bring
 it down and they sell it
 in the dry season of the
 year.

Q When did hydraulic
 mining so called as a class

Mining Commence in Eldorado County

A What they Call hydraulic mining now commenced, the first that I knew was in 1855 or 1856 the first that I saw of it.

Q Where?

A The first hydraulic mining I saw was at Coon Hill.

Q What other kinds of mining have existed in Eldorado County besides gravel mining?

A Quartz and seam digging.

Q How many stamps are there in Eldorado County at work on quartz?

A There are over 300 stamps in the County.

Q State the duty of the stamps?

A Those crush quartz and gravel

Q To what extent on quartz what is the duty of a stamp

A The duty on quartz will range from $2\frac{1}{2}$ to 3 tons in

24 hours. On gravel I estimate on what I know — gravel stamps will crush about four tons to the stamp. O What is the floor character of stamp sand with reference to natural sand. A Stamp sand will run further than natural sand that is I found it so.

Mr Bodwalader He will consider it as proven that newly made sand will move with less rapidity than sand that has been water washed. One is round and the other is angular.

Mr Sibber That is not the object of the question one is flour sand and is lighter.

The Witness It floats further.

O What kind of wash has taken place in Eldorado County and in the water sheds of the Middle and South Forks of the American River our side of the mining wash. A Well in Eldorado County

Along the South Fork there is a great deal of washing besides mining washings.

Describe it {

A In slides. I call it natural washings. What I call natural wash is what runs out. The natural wash occurs where there is farming land and in fact in all that portion of the County and wherever a track is made or stock travels on the roads run the ground is broken and then the natural wash commences. It might properly be called the artificial wash. There are hundred acres of slides up there. I was a ditch man of the South Fork and on this flume for 25 miles in that district that I had there were five of these slides and they were immense too. When I first went there in 1868 on the Eureka Ditch there was what was called

The Red Slide. It was I
 think ten Chains long that
 would be 240 Rods. Yes it
 was further than that it was
 about 246 Rods. That Red Slide
 was an enormous slide.
 It comes over every winter or
 it did as long as I was in
 that ditch and in the space
 of three miles there was five
 slides and they run right
 down to the South Fork of
 the American River. This
 Red Slide runs into Long
 Canyon about 200 yards from
 its mouth on the River. This
 continues now or did
 because. Dives there
 I was out hunting and
 I went out to look at
 the old place where
 I used to live and I
 went to look at the
 red slide. In the
 red slide there is
 more earth than rock.
 It has worked down and
 there is quite a large

opening there. It must
 be 8 or 10 acres and it
 is a kind of red, granitic,
 loamy earth. There were
 very few rocks in it. The
 mountain is very steep
 there and whenever there
 is a stream this red
 earth commences moving
 down. Some of it is rock.
 There are other slides there
 and one of them is very
 near as large as that at
 Dick's and it runs right
 straight down to the river.
 The whole of the country
 there whenever it does
 rain this ground works
 off. I could not say what
 proportion of it but I have
 had occasion to know some
 thing about it because I
 have had my ditches there
 and in the winter time
 so much of this stuff
 came down into the ditch.
 It was a 36 inch ditch
 and it was running at the

Rate of four miles an hour and we had to turn it out and clean it out. That is what gave me an idea of what was moving but to tell what percent it was I could not tell it not intelligently.

Q Compare the mining area of wash with the area of other wash of the drainage territory of the South fork of the American river at the present time? A At the present time?

Ayes. A well the natural wash is greatest, far greater.

Q How much greater?

A well I cannot say how much greater, it is greater because this natural wash is such light material that it runs right into the river and the mining wash - it is estimated that 80 percent

of the mining wash will lie at the dump there and there is very little of that that does run unless they tail on the river side but it is a great deal more the natural wash I think than the mining wash.

Observe whether you know of land that has been made in El Dorado County? ayes.

Mr Hart I object to that I object to any more proof on that subject. They have examined two or three witnesses on it and we do not intend to disprove it we do not intend to deny that it makes better ground in El Dorado County than the bed rock upon which it is placed. We do not intend to controvert that

Mr Dibble I propose to show simply what we have shown heretofore by two or three witnesses.

that slickens makes good land. They have been trying to show that it despoils the land. They have proved by some twenty or thirty farmers of Sacramento that they have been injured by the slickens deposit and I want to show that it makes better and more productive land than the Valley.

Mr. Starr If you can show that it makes better land than we have in the Sacramento Valley I will make no objection but as to the improvement of land in El Dorado County by the top wash from the mountains we do not intend to controvert that and this is an unnecessary consumption of time.

Mr. Dibble I want to show by other witnesses that the railroad Company has made in this City

valuable land.

The Court That is not a proposition to prove any thing by this witness. I presume they will admit that this witness will testify the same as Blanchard and the other witnesses who have testified on that subject Mr Dibble I presume he will

The Court Then take it for granted that he will and go on to some thing else

Mr. Dibble I understand
 Your Honor to say that it was
 hardly necessary to go fur-
 ther into the population of
 Eldorado County.

The Court I believe that was
 a subject upon which they
 said they had no counter
 evidence.

Crop Examination of E. H. Evans

Mr. Cadwalader About how
 many buckets full of earth
 would a couple of miners
 work in early times on these
 river bars - what was
 considered a few days work
 where one dug and carried
 to the cradle and the
 other washed.?

all well, what would be
 considered a pretty good
 days work would be about
 100 buckets to the man.

9802 2 About 100 buckets, that.

would be 200 buckets to 2 men?

A With a cradle 200 buckets to two men, for instance one man rocked and the other packed.

Q That would make about a cubic yard wouldn't it?

A 200 buckets?

Q Yes sir? A A bucket of dirt I suppose is a cubic foot don't you

Q Well, I am asking you how much it would be?

A I do not know what size the buckets are.

Q Well, the were the common buckets of commerce, the common painted water pail.

A Yes sir, the common wood
in pail - I never measured the Earth then, what I considered a bucket of Earth.

Q That would be a large day's work for 2 men?

A Yes sir

Q One hundred buckets was about the average was it not?
A Yes, when

they first commenced to mine
they washed 100 barrels of
dirt and then come quit

2. But I mean by 2 men -
mining was always done
by a man and his part-
ner, were not the bars
very rocky?

A The bars in the river?

I were not the bars very
rocky? A Yes sir, there
were some of them very
rocky

2. You had to strip several
feet before you found pay
dirt? A. No sir, not
where I mined with a rocker.
I never stripped any ground

2 Where was it you mined?

A With a rocker?

2 Yes? A I mined on
Weber Creek and I mined
on Hogher Ravine and all
around in the Diamond
Spring District, you know -
you want me to go on and
designate the different
places, or do you want

me to locate some places
 2 I want you to state
 where you mined on the river
 a well I mined on the
 bar at Coloma with a
 rocker and I mined on
 the bar, I think all the
 bars from Fords Bar to
 Kelsey Bar on the Middle
 Fork and I mined on
 Coy's Bar on the Yuba
 I think is enough.

a I could give you a few
 more if you want them

2 Mr. I just want you
 to state that you had been
 to work on some bar?

a Yes sir,

2 Two men on the bars
 on the Middle Fork would
 wash more than 100 buckets
 a day between them?

a Well, I have told you
 what I did. I have never
 asked the others what they
 were doing, but Miner
 and I used to wash 200.

2 When did the mining

Cease on the South Fork,
Substantially?

A well the principal part
of the mining — there is
mining going on there now.

2 When did it substantially
cease? A Miner's com-
menced going away from the
South Fork in the summer
of 1853 and a great many
of them worked, but there
were not near as many
as there were the years
before.

2 Well, by 1854, was the
river substantially abandoned?

A Oh no,

2 well, when was it sub-
stantially abandoned?

A I do not consider it sub-
stantially abandoned now.

2 About what time?

A well, I say, I do not
know what you mean by
substantially abandoned —
no mining done on it do
you mean.

2 When did river mining

Substantially cease, that is
what I want to get at,
on the South Fork?

A well, I do not know
what year because I do
not hardly understand how
you mean. I consider that
for instance last year the
river was turned in 3 or 4
places you know - well
every year some companies
turned the South Fork above
here

I I do not want to get in
to an argument with you,
but when did the mass of
the miners leave the South
Fork? A They pri-
ncipal part, when they
left was about 1850,
never mining

I was there any mining
done of any consequence after
1850? A Not to my

Knowledge, I was not there

I When did the mass of
the miners leave the Middle
Fork?

Q. The mass of the miners, that I asked not answer in, what year.

A Well, as far as your knowledge goes?

A About 1856 and 1857 they commenced throwing out.

Q When did the mass of the miners leave the dry digging in Eldorado County?

A The mass of the miners left the dry digging of Eldorado County, they commenced going I think so that they left in great numbers in 1858.

Q When did they go away?

A Well, they came mine them in the counter, and then go to these rivers but I thought you meant when the Exodus was, and they left.

Q Well, the Exodus from the dry digging of Eldorado County. When did they get worked out?

A About 1858

Q Was there any fill from either river mining, or from

place mining in the South
North Africa 1867 and 1868?

Ayer sir, there was a fill
made in the South North, a
noticeable fill I think in
1855.

I wall, I mean any fill
of any consequence?

A wall, I say you mean
filled with tailings?

I Yer sir? After sir,
the first I noticed of any
fill in the river was in
1855 and that was I think
in three places.

I In how many places?

A In three places that
I was at

I You saw a fill there
and you? Ayer sir,
it had filled in with
tailings

I What did it come from?

A It came from what you
call the dry dyer mine,
the placer mines

I Where? A It came
from Indian Creek and

Granite Creek.

Q Those are streams that empty into the Cosumnes?

A No sir, they come right in at Coloma, that was when I noticed it and how I noticed it.

Q That was when you saw the first fall?

A The first that I noticed that the river had tails in it.

Q There was quite a heavy fall in the river in 1884 was there not, where Marshall's mill was. That was on top of a high bar was it not? A It was not a very high bar at Coloma, I do not think the depth of that bar is over 5 or 6 feet in places.

Q Marshall's mill was constructed on it, was it not?

A It was a bar in the stream, Marshall's mill was built in a wide place in the river, you know

and the bar was not very deep then

2 Marshall Mill was constructed on the bar was it not? A Yes sir

2 And the tail race ran through the bar?

A Yes sir

2 The head race and the tail race? A Yes sir

2 Well, there is not much more fill there now than there was at the time of the discovery of gold is there? A Yes sir, a

great deal more fill all the way down the river below there and right there there is an immense fill

2 When you were working in the river you simply worked the drift of the river didn't you?

A The whole?

2 When you were fluming the river, you were simply

moving the drift of the
river.

A Yes sir, in the bed

Q. You took it out of the
bed and put it into the
flume?

A Yes sir

Q And let it go down 100
or 200 yards?

A Yes sir

Q. And when you mined
off the top of that bar
you did the same thing?

A When we mined off the
top of the bar we dump-
ed into the stream, the
current

Q. And in both cases you
did not put anything in
the river bed that was
not there before you came?

A As a matter of course
when we mined on a bar
we put the bar back

cut to the river bed and when we mined on the river bed, we dumped in to the river bed

Q You were simply disturbing the natural drift of the river?

A Yes sir, that is what we were doing

Q That is all you ever did in that mine?

A No, I worked some bank mining, I worked on the bank of the river

Q You found when you went there as you say about 5 feet of an average fill in both rivers?

A Yes sir, where I worked I do not think it was deeper than that to bedrock on the riffles

Q That has been material in which you found the gold? A Yes sir

Q You never found any gold in simple gravel and sand did you? A Yes sir

Q Didn't you find it with clay in connection with clay? A No sir

Q Did you ever find any gold in washed gravel?

Answer I do not understand you about clay. I do not consider that the sand in a river, what I call sand is the mixture between the gravel and the cobble or rock - I would say if speaking to a miner that it is sand we wash to get the gold

Q It has some coloring matter in it has it not?

Answer sir I was going to say that I did not consider it was clay. I suppose there has been clay got out of the river, I do not say that for a minute that there was not, but what I always worked I always considered it sand because it washed easy

Q More or less earthy matter in it, that is where the color is taken?

Ayes si

Q And you would have in cleaning up in the evening to take your hand in this way in the pan to break the lumps up?

A No si not in the river

Q Would not it make the water in the pan muddy, and wouldn't you have to dip your pan in the river half a dozen times?

Ayes si Sometimes it would color it and some gravel would not. Probably the gravel would color it somewhat from the streams but there was more of a sediment in the pay streak on the bar than it was in the stream

Q The panning operations were confined to what is called

9875

the
" "

river channel when you

flumed the river?

Ayes sir

Q That was to get out the gravel in the bottom of the channel? Ayes sir

Q Well did you ever find any gold where the river had been washed and the bed rock was smooth? Ayes sir, I

have found it in the bed rock smooth where it had formed cracks

Q You would find it in crevices of the bed rock? But what I asked you that where the gravel was washed and the bed rock was smooth whether you ever found any gold? And not in smooth gravel without there was sand in it

Q That was ~~the~~ why nearly all fluming operations were failures?

Ayes sir. They were not all failures

Q They argued from finding gold in the drift of the bars that it would also extend through the bed of the river?

Answers: that is what they thought

Q When did the mining in the rivers commence and what time did it end?

A Well I say that I could not tell you the year it ended because I do not know

Q What time in the year I mean, how soon did the water get down low enough in the year for river mining to commence?

A Well what we would consider commencing, the work would be getting ready, we would always commence in the Spring, but when we turned the water generally would be about July, sometimes August and sometimes

later than that and then they would mine until the rains came and raised the river so that it would run itself.

Q You were pretty sure of a raise in the month of October that would wash it away?

A Well one year I was pretty sure of it because I got washed out. I know that.

Q Well July, August and September and part of October were about the only months that any mining was done in the rivers?

A That was where you build a dam and turned the stream and put it into a flume, but there are men that mine as early as June by building coffer dams, that is cutting off a portion of the stream and getting the water out.

Q But the waters did not go down until about the first of July? A No

Q Then bar mining and bed mining commenced?

A Yes sir

Q And it would be continued up to the first rains?

A Yes sir

Q Then the miners would go to the dry diggings?

A Well, they mined on bars, plenty of men mined all the year on bars, the high bars

Q That is the main bars?

A Yes sir

Q But they would not go down to bed rock?

A Yes. They would go down to bed rock certainly

Q Not close to the river would they?

A Why certainly, I have seen men working within a foot of the river

Q I am talking about as a general thing.

A well, as a general thing if a bar is deep as a matter of course they could not work it until they commenced making pumps and pumped these holes out.

Q They could not work more than 10 or 15 buckets to a man could they before they put in the pumps?

A Yes sir they could certainly. If they could not they wouldn't have made any money.

Q Now I want to understand whether there was any river mining of any consequence except between July and November up to the first rains?

A Not river mining no.

Q No river mining?

A No sir.

Q Now as a general thing were not the dry diggings so called fine or sirp

miles from the river?

A Yes sir they were scattered all over the Country.

Q Where were the Auburn dry diggings?

A About Auburn?

Q Where were the Auburn dry diggings? A I do not know.

Q Where were the dry diggings in El Dorado County? A All over it.

Q Where? A Well they are laid out in mining districts. There was the Diamond Springs district.

Q The Diamond Springs district is on the Cosumnes divide is it not?

A No sir, that tails into Weber Creek.

Q I did not ask you where it tailed, but it is on the divide is it not?

A What divide?

Q On the divide between the American watershed and the Cosumnes watershed?

A The Diamond Spring district yes, a portion of it is in each

Q It kind of straddles it? Ayes sir

Q That is fifteen miles from the American river is it not?

A In what direction? It is nearer than that right straight across the river by the road

Q Well say by Weber Creek say by any water course? A Well it is about five miles from the Chile Bar ^{bridge} ~~strings~~ to the Diamond Springs

Q To the Pontre fork?

Ayes sir

Q Do the water courses run that way?

A No sir, they do not run that way, Weber Creek is between the two

Q By the water course it would be 15 or 20 miles would it not?

Ayes sir. It is a good way by the water course

Q The Diamond Springs, the Placerville, the Stog's dry diggings and Greenwood they were all remote from the river?

A The dry diggings at Placerville are right on the river, some of it is right on the river, right on the South fork, some of it is in Weber Creek.

Q How near is Placerville to the South fork?

A Near 2 miles.

Q Placerville is on Stang Town Creek is it not?

Ayes sir

Q Stang Town Creek empties into Weber Creek does it not? Ayes sir

Q Well fifteen sixteen of the mining at Placerville has been done on Stang Town Creek has there not?

A There has been a

great deal of work done
on that creek?

Q Fifteen sixteenths of it
a all around there,
yes sir

Q That empties into Weber
Creek? Ayes sir

A And by that route
it is 15 miles to the
South fork? Ayes sir
it is all of 15 miles I
believe

Q Stugs' dry diggings how
far? a I do not know
where Stugs' dry diggings
are

Q You do not know where
it is? Do you know
where Greenwoods dry
diggings are?

Ayes sir

Q How far were they
from either river?

A Well I could not say.
It is a short distance
from the middle fork

Well it is about 8
miles is it not?

And I do not think it is
it maybe 8 miles by
the road.

Well it is 8 miles by
the road? Ayes sir.

Q It would be more by
any ravine wouldn't it?

And because I think there
is a ravine runs down there
by the line beln that
is not over 5 miles right
down to the middle fork.

Q You say all the mining
up to 1862 is what you
call surface mining?

Ayes sir.

Q Done with the pick
and shovel?

A All mining up to 1862?

Ayes sir?

And sir I do not

Well I mean all the
surface mining was done
with a pick and shovel?

Ayes sir oh no! you
misunderstood me. If I
said so I said wrong,
I did not say so.

Q Well I do not pretend to say that you did. I ask you whether the surface mining, whether this shallow mining that you call surface mining was not done with a pick and shovel?

A No sir certainly not. Some of it was done with what they call hydraulic mining.

Q But I mean the shallow mining? A Yes sir hydraulic shallow mining.

Q As a general thing?

A As a general thing it was done in sluices pick and shovel and ground sluices.

Q You never saw any little faults there before what year?

A Little faults I do not know when I first saw the little fault.

Q You never saw one

in El Dorado County did you? Ayes sir

Q Well when?

A Well, give me time and I will tell you the year that I first saw one there

Now tell us something about it. It is very hard for you to recollect is it not? when you first saw a little frunt in El Dorado County? Ayes sir it is

Q And you have not seen one in operation there for years have you?

A Well I have not seen one in operation since I came down here Saturday and I saw three of them running then

A Well, you have seen three have you?

Ayes sir

Q On what mine?

A All three of them were in the Excelsior

Q How far from the American

river? A That is about
35 miles from where
Weber Creek goes into the
river

Q None of its material
was going into the American
river. A A very small
proportion of it

Q Well was there any?

A I did not see any

Q Where was it tailing?

A The tailings dropped
onto the dump you know
and then went into the
Creek

Q Into what creek was
it tailing; Weber Creek?

A Yes sir

Q The head waters of
Weber Creek? A No sir

Q All the witnesses
have said that there
has been no tailing into
the American River for
years and years Is that
so? A No tailing of
what? Q Of the hydraulic
mines?

Q Yes, into the American river for years and years?
 A Yes sir I do not know of any tailing into the American river, I know they tail into Weber Creek
 yes there has been one mine tailing into the South fork.

Q Well what is that?

A That is called the reservoir hill mine.

Q So what extent?

A Well I do not know how long they run whether they made more than a clean up or not.

Q Well how long would it take them to make a clean up? A Thirty days.

Q That is about all you know? How many years ago was that?

A That was last year.

Q That is all you know about any hydraulic mining into the American river.

up there for the last
five or six years?

Ans. I did not say
so. I said that they
dumped right immediately
into the American river
That one mine dumped
into a Cañon that goes
into the American River,
the other mines dumped
into Wilber Creek

Q. You say into Wilber
Creek? A. Into Wilber
Creek their dumps are

Q. Well, what I ask
you is: do you know
anything about any hy-
draulic mining into the
South fork? A. Well I
tell you I know that
that Reservoir mine
dumped into the South
Fork

Q. Where? A. At Reser-
voir Still

Q. When did you see
it worked there?

A. I saw it last May.

Q Has it been at work since? A Well I say that they were making a run, I do not know whether they run over that run or not, I do not know. I was not selling water on that portion of the ditch — I do not know.

Q All the Witnesses have said that there was no hydraulic mining on that river in 1881?

A I said so?

Q All the other Witnesses A I cannot help that, what they said.

Q Do you know of any other mining working in the South Fork?

A In 1881?

Oyes sir A The Roundout mine ran.

Q For how long?

A For two months and seven days.

Q Has it been running

since? A I do not know whether he is running since or not. I am telling you these things. I know that mine ran then

Q How much water did that have? A He used 300 inches

Q When did he commence running? A He commenced running the 2nd day of March and ran a month - no, hold on - he commenced running the 2nd day of April

Q When did he quit?

A He quit the 7th - I think they cleaned up either the 9th or 7th of June

Q How long has he been working since?

A I do not know. I say but that I know

Q Had he been working any the year before?

A Not with hydraulicking

no he fit up his mine
that winter

Q Stune you stated all
the hydraulicking into
the South fork that you
know of during the year
1881? A well, I say
these mines tail right
into the South fork,
those two mines, there
is a mine that Alderson
opened

Q I am asking you about
tailing into the South
Fork now? A well, those
are the only two mines
that I can think of now,
with any amount of water

Q How much water did
the other claim use?
A At Reservoir Still they
used 500 inches

Q Who own that mine?

A It belongs to Stancock
and I

Q Stancock of what place?

A He lives there in
Placerville I think, he

went to Oregon, but I think he has got back.

Q That is all the hydraulic mining you know on the South fork? Ayes is that is in operation.

Q You feel satisfied that is all there is?

A Well that is all I consider that is running into that river, now, there are mines that tail into Wolber Creek, I would not designate it as mines that would dump into the South fork although Wolber Creek leads right into the South fork that is my understanding.

A Your idea is that everything put into Wolber Creek goes into the South Fork is it not?

A No the water goes there, but not much else is laid there.

Q Is there any deposit

at Wether Creek below the Coloma Crossing, any deposit of tailings below the Coloma Crossing?

A Yes sir there is.

Q Where did it come from? A It came down that creek I could not tell you where it came from.

Q Were these cobble stones from those mines?

A No sir not from up around the Excelsior, I do not think there is.

Q Where do they come from? A They came from that portion of the Country out towards Missouri that where the Davenport mine is, that is what is called in the Diamond Springs district.

Q Cobblestones then do go down Wether Creek you are satisfied of that are you not?

a They go into the creek certainly

Q They go down the creek don't they?

a I don't know whether they go down or not, they go into it sure

Q How could you see them down below Coloma if they had not travelled down there?

a Because there is the tailing of a mine right there

Q Where? A Right below where you call the Coloma Crossing - no I beg your pardon, you are talking about another place. I am talking about the crossing from Coloma where you go across to Shingle Springs. You are talking about a crossing that is way down below going to Folsom, that I do not know anything about that

part of the creek I do not know

Q Is there any fall in Weber Creek below the Coloma crossing?

A That I do not know

Q You do not know any thing about it?

A No sir I do not

Q Is there any hydraulic mining going on into Weber Creek?

A In Weber Creek yes sir

Q What mines?

A Well the Excelsior, the Sturdy, Abby Stuart's mine, and the Loomis

Q The El Dorado Deep gravel? A That is the Excelsior, they own all that Corn Still and around there

Q What is what you call the Excelsior?

A Yes sir

Q Has that been operating this year?

A Yes sir they are running now

Q That is Mr Price's mine is it? Is that the Price mine? A Yes Sir

Q Why didn't you say so at the Price mine - we don't call it the Price mine

A Well is that the mine of which Mr Price is the President? A That I do not know; he is manager of that concern, I call it by the name it goes by, the Excelsior mine

Q We understand that he is the Manager of that mine. Where did the material go to that was put in the river before 1862? A That I could not tell you

Q How much did the South fork rise in 1862?

A In 1862 that I could not tell you in feet to save my life

Q Have you ever been

on that river during a high flood?

Ayes sir not that far down

Well have you ever been any place where there was a high flood?

Ayes sir

Well how much did the river rise from low to high water mark?

A Above the high water mark

Q How much above the low water water mark?

Well I saw it rise at Kelsey's Bar in the winter of 1850 and 1851 I was there and that was considered a dry year that year, it raised 25 feet in one night that was at Kelsey's.

Q That was a slight raise? Well I do not know because I just happened to be there and see that

Q 25 feet in one night?
 Ayes sir

Q Well how high have
 you seen the evidences of
 water above low water
 mark in that stream?

A I never noticed
 particularly

Q 60 feet? A I say
 I never noticed particularly,
 I could not form any
 idea

Q But you recollect the
 river rising 25 feet in
 one night? Ayes sir

Q And it was not a
 very wet winter?

Ans They did not
 consider it a wet winter

Q How much water
 was flowing in that stream?

A I could not imagine
 sir, I could not make
 any estimate

Q You never measured
 it? Ans sir, I say
 I could not estimate it,
 I could not form any

judgment in relation to it

Q What do you mean by the ground being harder now? Do you mean the mining ground?

A Yes sir where they took the gold out

Q The old placer claims in El Dorado County have been worked over 3 or 4 times haven't they?

A Yes sir

Q So there is no places mining there now?

A Very little

Q Scarcely any? A No very little places mining

Q And you think that the amount that the mines contribute to the streams at this time in El Dorado County is comparatively nothing?

A Yes so that?

Q You think that the solid material that the mines contribute to the streams in El Dorado

County is comparatively nothing? As that is what goes away. I mean in proportion to what used to go in. For instance before, you know, this stuff that ran off could go off; now if it runs out of the sluice it stays there, that is the way I judge it is comparatively small.

Q So no harm could come in preventing what hydraulic mines there are in El Dorado County from tailing into the South Fork?

A No I think which?

Q I will ask you whether the hydraulic mines in El Dorado County are sending any solid matter of any consequence into the South Fork? And I do not think they are.

Q And if they were prohibited from so doing they would not be hurt?

no answer refers to the question but does not

by the operation?

A If the hydraulic mines were prohibited from working?

Q From putting the solid matter into the South fork, that would not hurt them would it?

Ans, it would not hurt them because they dump it in

Q It would not hurt any body would it? A I do not know

Q They could still continue their operation?

A well dump is a pretty hard thing to get up there

Q Well if they are not dumping into the river and never have been it would not hurt them to restrain them from dumping into the river. I want you to remember that - there are three principal ditches in

El Dorado County are there
not? A Yes sir

Q Do you know their
market value? A I do not

Q Do you know what they
are assessed at?

A I do not

Q What is the comparative
value of mining ground
north of the Cummins
ridge and south of it
in El Dorado County?

A That I could not answer

Q Well I believe you
stated to Mr Byrne and
Mr Dibble that it was
much larger south of
the divide than it was
north, the mining ground,
the undeveloped, unworked
mining ground in the
County? A I do not
think I did sir

Q You did not?

A I do not think I did.

Q Well I simply ask
you whether you did

or now I do say, since

You are talking about it, that there is more undeveloped ground South of the South fork to my knowledge than there is North.

Do you mean South of the ridge that divides the waters? ^{no} A There is no ridge about it, I simply mean that there is more of that blue channel to my certain knowledge going South from the South fork of the American river towards the Cozumnes than there is North because I know it. There are 30 miles of that blue channel that I have walked over and it is not worked.

Q These ditches that you speak of were all constructed before the Exodus of the miners from El Dorado County were they not?
 A No sir

Q The greater part of them? A They were started, you know, they have been enlarged since then as a matter of course these were for old mines. There were thousands of ditches in El Dorado County, a net work of ditches.

Q The Park Canal is about as long as any is it not? A I believe that the Georgetown divide Canal and the Park Canal have about the same number of miles.

Q And the El Dorado is the third one?

A Yes sir. There is not as great a number of miles of that ditch. They do not count the small irrigating ditches in their estimate.

Q How many irrigating ditches are there in El Dorado?

A I could not tell you
to save my life

Q 20 or 40? A There
are ditches that leave
the main ditches, for
instances they buy water
and carry it some distance
to that what you are after?

Q The number of irrigating
ditches five miles long
in El Dorado County?

A There are not any
ditches dug there on
purpose for irrigating
land that I know of
unless it is some man
who digs it himself. The
water at Gold Hill is
considered the nearest
to an irrigating ditch

Q What is the assessed
value of the property
of El Dorado County border-
ing on the American river
water shed?

A I could not tell you
sir

Q Well say that for

the whole County it is \$3,000,000, what would it be for that part of the County called the American watershed? A well sir I could not say. I do not know how they assess these mines.

Q What is the assessed value of the mining property in the American river watershed? A I do not know.

Mr Dibble I object to the question. It is not cross examination.

The Witness I could not answer the question unless I had my book or something. I know, but I could not remember.

Mr Caldwell A What is the reason that El Dorado County with her immense mineral resources as described by you, has been bankrupt?

A That I could not tell you.

Q For the last ten years?
 A I could not tell you sir

Q Well for some time
 you had no County organi-
 zation had you?

A County organization
 yes sir

Q Didn't the officers
 all resign?

Mr Dibble I object to that
Mr Caldwell we claim
 that when a bogus statisti-
 cian gets upon the stand
 that we have a right to
 go to the bottom of this
 thing, it is well known
 that El Dorado has been
 in a disorganized condition

The Court It is not necessary
 to call any such names
 at all. In Court we are
 supposed to have some
 degree of courtesy towards
 witnesses and everybody
 else and because a witness
 testifies against you is
 no reason why you should
 call names

Mr Badwalader He said there were \$150 000 000 of gold there. Well now I have a right to show that that County is in a bankrupt condition

The Court I do not see what light that will throw upon the amount of mining that may be done hereafter.

Mr Badwalader How are you going to get at it?

The Court Ask him the sources of his knowledge and opinion

Mr Badwalader Of course he says he can't look into it and he cannot give any further testimony on this point than what he then saw

The Court Possibly if he knows nothing about it his testimony would not be considered of any consequence

Mr Badwalader Q Is the natural wash of the

mountains in El Dorado
County greater now than
it was when there were
so many miners?

A The natural wash is
greater now than it
was before

Q When there were some
20 000 or 30 000 miners at
work on the surface?

A Yes sir

Q Between 1849 and 1858?

A Yes sir the natural
wash is greater now.

Q Don't you find the
surface of nearly all
the hills in El Dorado
covered with pine cones?
and pine leaves - leaves
of pine trees? A No sir

Q Don't you find the
pine cones almost
everywhere on the surface?

A No sir

Q Don't you find the
pine leaves in mass
sometimes six or eight
inches high? A In

places some places

Q All over the face of the Country? Answer:

Q Have there been any roads of any consequence constructed in El Dorado County in the last ten years? A I do not know that there has in 10 years

Q Has not the principal road in El Dorado County been closed up within the last ten years?

Answer: That is to a certain extent it has, this railroad

Q What part of El Dorado County lies under the snow say from the 1st of January to the first of April? A Well it commences about 5 miles East of the town, I think we get into the snow shed then

Q Then you run to Lake Tahoe? A Yes

Q What part of the

County is uninhabited
is it not? Ouh no, it
is all settled up in
through there

Q You mean it is taken
up in ranches or people
live there in the winter?

A It is taken up in
ranches

Q Occupied by stock
in the summer?

Ayes sir

Q Do the people live
there in the winter?

Ayes sir there are
people who live there
in the winter clear up

Q They live on the
pounds? A some do
and then there are some
mining camps there too

Q What I want you to
do is to take the face
of the Sierras from Rey
10 miles East of Placer-
ville to the Western
margin of Lake Tahoe
and tell us about the

population of that part
of the County? A That
I could not do sir

Q Neither man nor beast
lives there in the winter
do they? A Yes sir

Q Don't they drive the
stock all down into the
Valley? A Yes sir they
drive the principal part
of the stock

Q How deep does the
snow get there? A I do
not know sometimes 12
or 15 feet deep, in places
5 feet

Q Well it gets to be 50
in some places don't it?

A I guess it does

Q Rains fill up?

A Yes sir but there are
a good many people

Q Some part of the terri-
tory is 12000 feet high?

A I do not know what
the altitude is of it

Q You know it is about
12000 feet don't you?

A I do not

Q The highest part of the Sierras from Mt Whitney on the South to Mount Shasta on the North?

A I do not know I believe

Q There is no travel in that country in the winter is there? A In the

Eastern portion of the country there?

Q Yes sir A After you get about 14 miles from town there is no travel across the mountains in the winter.

Q What part of the remainder of El Dorado County is capable of being farmed, cultivated?

A It would be the portion of the South Western portion

Q No you take all of El Dorado County west of this 5 or 6 mile line East of Placerville?

A Well there is a good

deal of good farming, that
is they raise good stuff
all through there across
to the Cosumnes

Q Tell me whether all
the valleys in that terri-
tory are used either
by farmers or fruit growers
or by grape growers?

A Not all of them.
The greater portion of them
are used for that pur-
pose in

Owells El Dorado County
has become a great fruit
growing country has it not?

A Yes sir. The fruits
are known all over the
United States? A Yes sir.

Q And they bring a
higher price than any
other? A That I do
not know. I hear them
say that they get a better
price for Coloma fruit
than any other.

Q I will ask you whether
the Coloma peaches are

not about as celebrated as
the gold that Marshall
discovered at Coloma?

As I do not know

Mr Dibble I object to that
I asked nothing of the
kind at all.

Mr Leadwade, & what
part of that Territory
I have just mentioned
is devoted to grape raising?

Mr Dibble I object to that
on the ground that I
asked nothing of the
kind at all, not even
in reference to cultivation.
I asked for the natural
wash outside of the
mining wash without
reference to the culture
of land or anything.
I did not even ask him
if the land was cultivated.
I asked nothing about the
denuding of the land, I
simply asked as to the
natural wash.

The Court I think you

had better confine your
examination to the chief
Mr. Cadwalader When
did you do any mining
last? Am myself?

O yes sir
a I mined last winter
a year ago.

O where do you live?
a I live in the City
of Placerville sir

O what is your business?
a well I am a working
man

O what do you work at?
a I worked on the ditch
last summer selling
water and then I mined

O well hold on, you
are Mr. Price's ditch
agent are you?

a I was once, yes sir
O that is the last
mining that you did?

a Oh no, I say I have
got a mine that I work
myself

O where did you do

any mining?

A The day before Christmas

Q How many days?

A Well I think I worked
an hour that day

Q Where was it, in your
back garden at Plummerville?

A No sir it was a seam.
I have a seam claim

Q Where did you work?

A On Poverty Point

Q Is that the mining
you have done in the
last five years?

A No sir

Q Well, what have
you been doing the last
five years?

A I have been laboring
for my living and working
by the day

Q Where at? A I tell
you I worked five months
for Mr Price on the ditch
as a agent selling water

Q I want to get the
last 5 years where you
worked? A The

last five years?

A Yes A I worked the first of the five years I was selling water in gold Still and then I went to work - I want you to know that I am going to tell you where I worked and you have got to sit and listen to it. you asked me the question

Q That is what I want
A I worked on the Shetler
lager mine a steam mine
on granite Creek

Q What year was that?
A That was in 1877

Q How long did you work that year?

A I worked there a year and four months myself, made a hand there

Q 16 months as a hand
A Yes sir I then got

broke and went to work
on the road I had
nothing else to do and
I could not get anything
else at that time and
I made a hand at
that work

Q That is quite as good
as mining and quite as
profitable?

A It was not quite as
profitable but it suited
me and then I went to work
on a mine that is known as
the Roundout mine drifting
and I worked there until last
May, I think I worked
there in all about five
months and then the
water that I got there
I could not get from
the ditch because they
were selling it to a larger
Company and then I
went to work selling water

